Annual Comprehensive Financial Report

for the fiscal year ended June 30, 2024

Adapt

Evolve

Innovate

Longevity requires evolution, planning and persistence.

PSRS/PEERS

PUBLIC SCHOOL & EDUCATION EMPLOYEE RETIREMENT SYSTEMS OF MISSOURI

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for the fiscal year ended June 30, 2024

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Dearld Snider
Executive Director

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www.psrs-peers.org

Prepared by PSRS/PEERS' accounting department in coordination with staff from other departments.

PSRS/PEERS

PUBLIC SCHOOL & EDUCATION EMPLOYEE RETIREMENT SYSTEMS OF MISSOURI

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"To improve is to change; to be perfect is to change often."

~Winston Churchill

Introductory Section

Mission Statement, Goals, Focus Areas

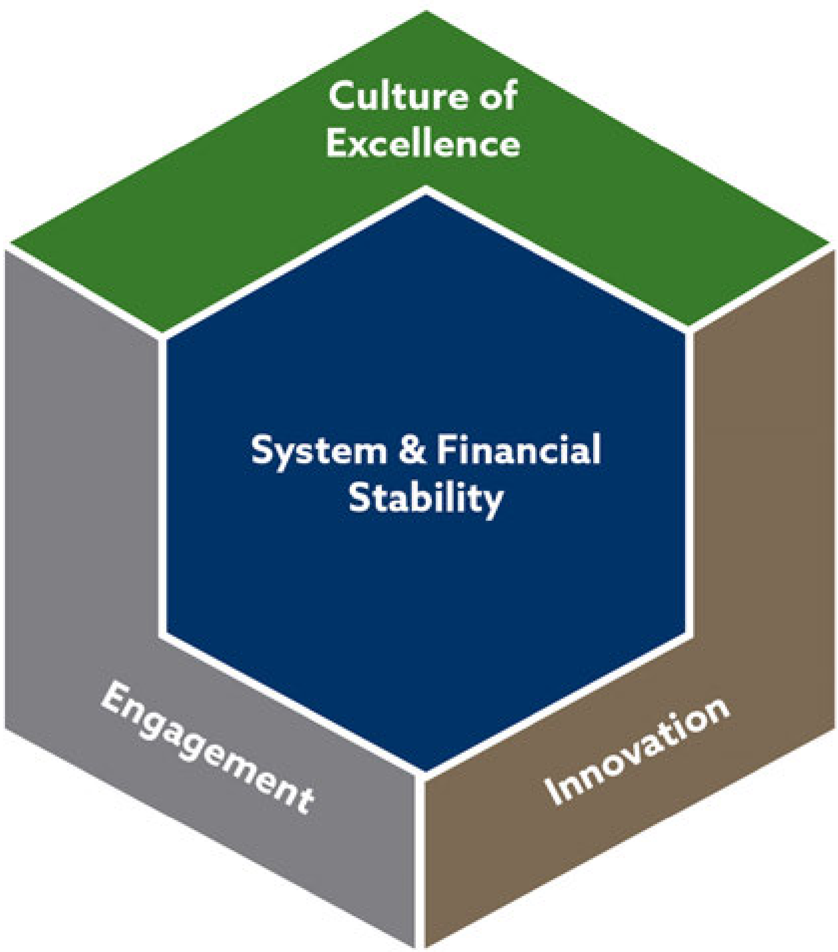
MISSION STATEMENT

To provide financial security and peace of mind for Missouri's public education community.

GOALS

To provide retirement security to Missouri's educators and education employees after a full career of service.	To help school districts attract and retain the best and brightest educators and employees for Missouri's school children.	To manage the Systems in a prudent and cost-efficient manner while continuing to provide exceptional service to our members.

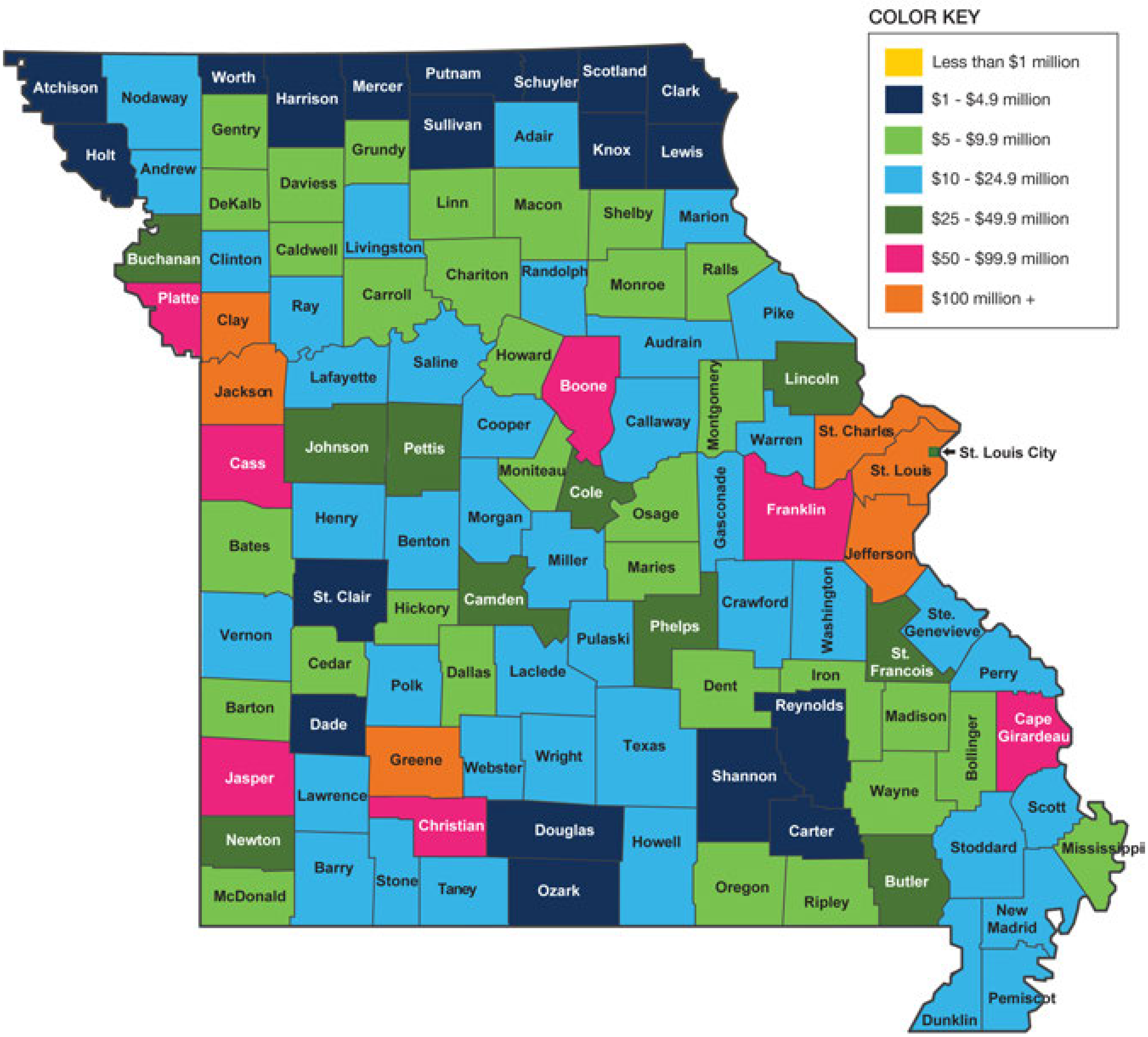
FOCUS AREAS



Economic Impact

The benefits distributed by PSRS/PEERS make a sizable contribution to Missouri's economy and help Missouri public schools attract and retain quality teachers and education employees.

As of June 30, 2024, approximately 110,000 individuals received benefits from PSRS/PEERS. Total annual benefits paid for the one-year period ended June 30, 2024 was over $3.8 billion. Of this amount, almost $3.4 billion, or 88%, was distributed among Missouri's 114 counties, positively impacting the state's economy.



Longevity Requires Evolution, Planning and Persistence

Longevity is a requirement for the successful administration of any defined benefit pension plan. As a provider of lifetime monthly retirement benefits, we serve multiple generations of members for the majority of their adult lives.

There are both advantages and challenges to serving our members over such a long time horizon. We must foster planned, ongoing, positive change to stay strong, and to naturally evolve and reach our goals.

While evolution is certainly required to succeed long-term in the ever-changing world of institutional investing, another very important part of PSRS/PEERS' evolution involves how we inform and educate our members.

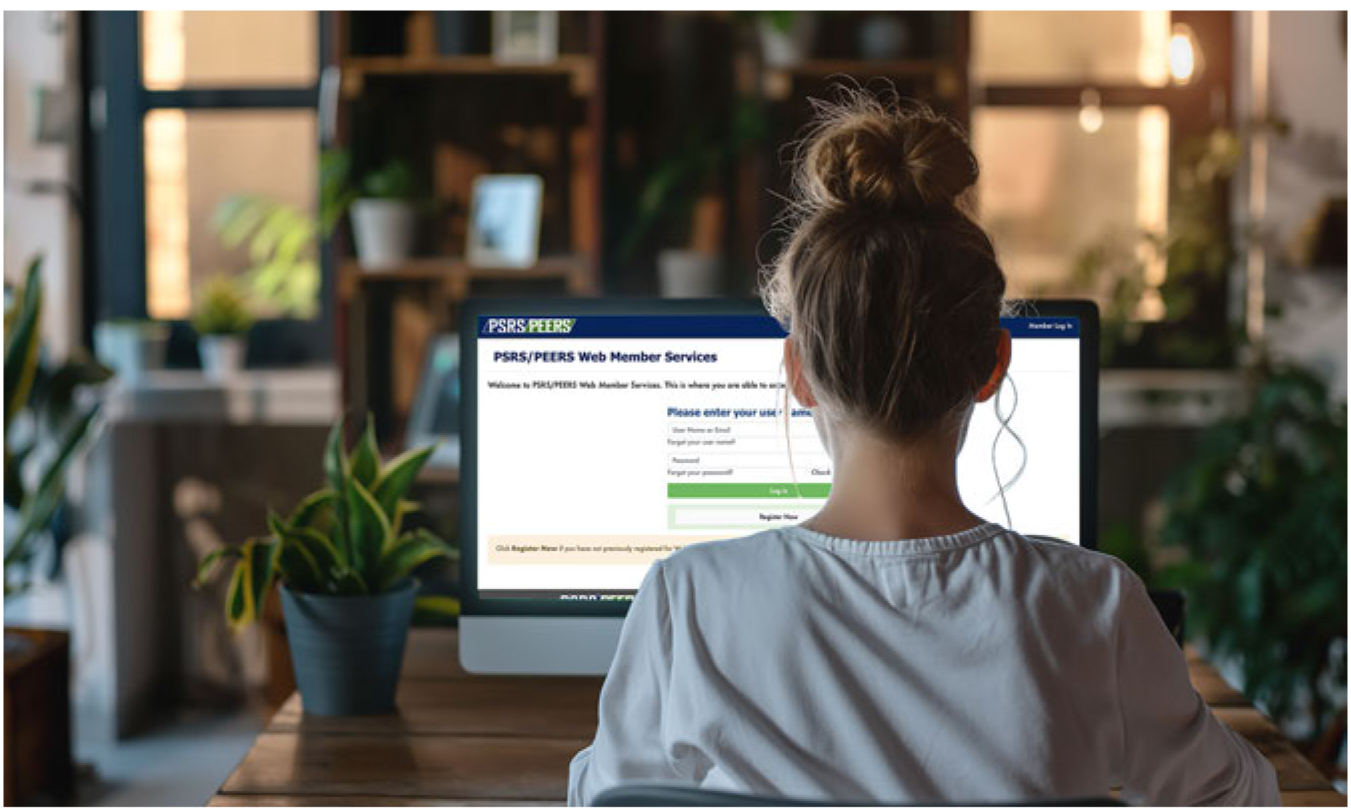
To meet our members' changing needs, we must provide documents, information and services in increasingly diverse and more convenient formats. Staying abreast of cutting edge technologies is one way we achieve this.

Several recent projects illustrate how we have leveraged technological advances to evolve and enhance our member interactions.

Digital Document Center

Since 2015, we have maintained an ever-growing, online self-service portal called Web Member Services. Using Web Member Services, members can view and update a variety of information related to their PSRS/PEERS membership and benefits. In fiscal year 2023-2024, almost 139,000 members were registered users.

Expansion is now underway on an important part of Web Member Services called Document Center. Document Center is an online document repository where our member services specialists can share requested correspondence and forms instantly and securely with members rather than mailing them. Work is ongoing to give members the option to automatically get all correspondence and forms in their Document Center, rather than in the mail. When complete, this conversion will ensure members get the information they need faster and more efficiently, while also helping us save time and money.



Retirement Education Podcasts

Our Member Education team has long prided itself on helping our members stay informed about their membership and benefits. They do so by providing a wide variety of educational opportunities both in person and via the web.

In an effort to bring retirement education to our members in as many formats as possible, the team has recently embarked on a new educational podcast series. With the addition of this new delivery channel, they hope to find and retain new audiences among members of all ages and life stages who are interested in learning more, and continue to improve the quality and quantity of the conveniently accessible, retirement-related information we provide.

Improved Member Call-In Experience

Gone are the days when the only two options for members with questions were to call us or visit our office. Today, members enjoy the convenience of contacting our information center by email and web chat. While many choose those options, the volume of incoming phone inquiries remains strong, averaging over 7,000 calls each month during the 2023-2024 school year.

Our specialists must be equipped with knowledge to answer an ever-wider range of questions efficiently and accurately. To assist with ongoing training and quality control, we began using an AI conversation intelligence platform, in January 2024.

This AI conversation intelligence platform has streamlined processes by automatically transcribing recordings of phone calls into a searchable and easily readable format. Transcripts are regularly reviewed to help identify areas in which our specialists may require additional training. In addition, the platform is used to evaluate recorded calls based on criteria we provided to ensure the best possible member interactions, even assessing the tone and sentiment of both the caller and the specialist.

As our world evolves, so do we. We work under the premise that change is good! We are here for the long-haul and will continue to adopt cutting edge technology, provide exceptional member service and pay best-in-class benefits for our members. We are committed to a process of continual evolution that helps us achieve our mission to provide financial security and peace of mind for Missouri's public education community.

Board of Trustees

As of June 30, 2024

The PSRS/PEERS Board of Trustees is charged by law with the administration of PSRS/PEERS. Trustees are committed to providing services to the members and beneficiaries professionally, promptly, courteously and efficiently. The Board meets regularly six times a year, with special meetings called as necessary.

It is the fiduciary responsibility of those charged with the administration of PSRS and PEERS to:

- Effectively collect contributions,
- Prudently invest the assets to obtain optimum returns,
- Equitably provide benefits,
- Impartially and in accordance with applicable law administer the benefit programs, and
- Set contribution rates that are adequate to fund promised benefits.

The seven-member Board consists of three elected PSRS members; one elected PEERS member; and three governor-appointed trustees, one of whom must be a PSRS or PEERS retiree. Trustees serve four-year terms and serve without compensation.

Dr. Jason Steliga, Chair
Elected PSRS Trustee

Beth Knes, Vice Chair
Appointed Retired Trustee

Dr. Eric Park
Appointed Trustee

Allie Gassmann
Elected PEERS Trustee

Charles Bryant
Appointed Trustee

Katie Webb
Elected PSRS Trustee

Note: As of June 30, 2024, an elected Trustee position was vacant.

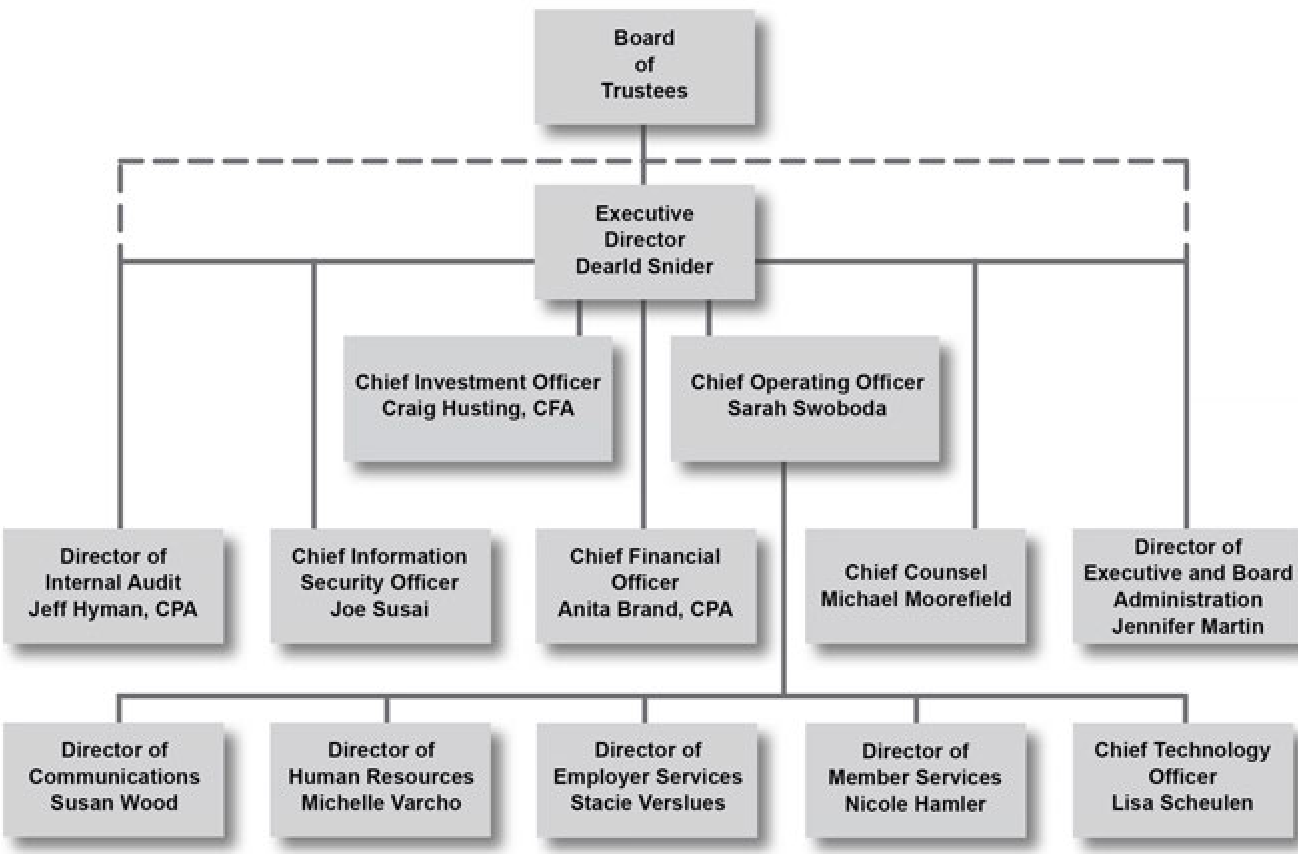
Administrative Organization

As of June 30, 2024

Dearld Snider
Executive Director

Craig Husting, CFA
Chief Investment Officer

Sarah Swoboda
Chief Operating Officer



Transmittal Letter

PSRS/PEERS
PUBLIC SCHOOL & EDUCATION EMPLOYEE
RETIREMENT SYSTEMS OF MISSOURI

December 4, 2024

To the Board of Trustees and Members of the Retirement Systems:

On behalf of all management and staff, it is our pleasure to present the ***Annual Comprehensive Financial Report (ACFR)*** of the Public School Retirement System of Missouri (PSRS) and the Public Education Employee Retirement System of Missouri (PEERS) for the fiscal year ended June 30, 2024.

The Systems' mission of providing retirement security to Missouri's educators in the most efficient and cost-effective manner possible is unwavering. ***Longevity*** is a requirement for the successful administration of defined benefit plans like PSRS and PEERS. ***Longevity requires evolution, planning and persistence.*** As a provider of lifetime, monthly retirement benefits, we serve multiple generations of members and their families for the majority of their adult lives. Providing secure and well-funded benefits at the highest level of service for our members is the ultimate goal now and into the future. While the Systems' mission remains the same as it has for the past seven decades, we must continuously ***evolve through managed effort and not through reactionary change***. At PSRS/PEERS, we employ strategic planning and take a long-term view to ensure the Systems' evolution is one that fosters and creates improvement, growth, and exceptionalism. Evolutionary behavior is not simply making changes, but instead, takes a more determined and structured approach. It involves a slower process of improvement that develops over time into a better, more complex and more advanced state. The Systems continue to evolve processes and enhance strategic planning, with a dedicated focus to our mission of providing a secure retirement for Missouri's education community.

PSRS/PEERS' continued ***evolution, planning and persistence*** has served the members of the Retirement Systems extremely well. As of June 30, 2024, PSRS was 87.2% pre-funded, while PEERS was 88.1% pre-funded. Based upon the June 30, 2024 valuations and overall financial projections, the Board of Trustees set the fiscal year 2026 contribution rates equivalent to the fiscal year 2025 contribution rates for both members and employers. This was the fifteenth year for the actuary to recommend and the Board of Trustees to approve the contribution rates to be 29.0% for PSRS and 13.72% for PEERS. The consistency of contribution rates for a long duration illustrates significant financial stability, strong and persistent governance, and long-term planning. Our members can rest assured that their Retirement Systems remain financially stable and well-funded.

The Systems' evolution has resulted in making PSRS/PEERS one of the strongest and best funded public pension funds in the nation. We realize the Systems' evolution is not complete and will continue with the same persistence and planning to ensure excellence now and in the future.

This letter provides a brief overview of the contents of the ACFR. We encourage you to read the Management's Discussion and Analysis on pages 21 to 27 for a more detailed analysis of our financial position for the fiscal year.

In addition to providing information to our Board of Trustees and members concerning the financial condition of the Systems, this report also meets our reporting requirements under Sections 169.020.(4).16 and 169.450.(4).11 of the Revised Statutes of Missouri (RSMo). Printed copies are available to the public upon request and the complete report is also posted on our website, **www.psrs-peers.org.**

Location 3210 W. Truman Blvd. / Jefferson City, MO 65109 **Mail** P.O. Box 268 / Jefferson City, MO 65102 **Website** www.psrs-peers.org
Phone (573) 634-5290 **Toll Free** (800) 392-6848 **FAX** (573) 634-7934 **Email** psrspeers@psrspeers.org

Transmittal Letter, continued

Report Contents and Structure

Responsibility for the preparation, accuracy, and completeness of this report, including all disclosures, rests with the management staff of PSRS/PEERS. The Systems' financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP) within the guidelines established by the Governmental Accounting Standards Board (GASB). To the best of our knowledge, the enclosed data is accurate in all material respects and fairly presents our financial position and operating results.

The management of the Systems is responsible for internal accounting controls, which are designed to provide reasonable but not absolute assurance that the financial statements are free of any material misstatements and assets are safeguarded. The cost of internal controls should not exceed the benefits to be derived. The Systems employ two internal auditors who perform operational reviews to ensure that the internal controls are functioning effectively. We believe the internal controls in place are adequate to meet the purpose for which they were intended.

Our independent external auditors, selected by the Board of Trustees, have conducted an audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit and the financial statements and related footnotes are presented on pages 19 to 60 of this report.

Overview of the Retirement Systems

The Public School Retirement System of Missouri (PSRS), a cost-sharing multiple employer retirement system, was established in 1945 (and became operative on July 1, 1946) by the Missouri legislature to provide certificated public school employees and their families with a significant and stable source of retirement income, disability, and survivor benefits. The majority of PSRS members do not contribute to Social Security.

The Non-Teacher School Employee Retirement System of Missouri (NTRS), also a cost-sharing multiple employer retirement system, was established in 1965 by the Missouri legislature to build a plan similar to PSRS, but for non-certificated public-school personnel. The name of the non-teacher system was changed to the Public Education Employee Retirement System of Missouri (PEERS) in August 2005 to represent the members of the System more positively. Members of PEERS contribute to Social Security.

PSRS and PEERS are governed jointly by a seven-member Board of Trustees, composed of three elected PSRS members, one elected PEERS member and three members appointed by the governor.

Unlike most public pension systems, the members of PSRS and PEERS and their employers share equally in funding the contributions to the Retirement Systems. The contribution rates in total approximate the contribution rates of similar public plans. However, this funding mechanism has kept the employer contributions lower and the employee contributions higher than many similar public plans.

The combined Systems serve approximately 316,000 total members in 535 school districts and other employers. As of June 30, 2024, over 110,000 individuals received retirement benefits from the Systems. Total annual benefits paid were over $3.8 billion for the year ended June 30, 2024. At June 30, 2024, PSRS/PEERS had a net position of approximately $59.0 billion, making it larger than all other public retirement systems in the state of Missouri combined.

Funding Status and Valuation Results

The Board of Trustees evaluates a large amount of information each year including, but not limited to, the annual actuarial valuations prepared by the Systems' external actuaries, PwC US. Annually, the Board of Trustees reviews the sensitivities to changes in cost-of-living adjustment (COLA) assumptions, inflation projections, and investment returns. The Systems completed comprehensive experience studies in May 2021. All economic and demographic assumptions were reviewed and certain assumptions were updated, where appropriate, based on the results of the studies and effective with the June 30, 2021 valuations. The PSRS funding policy was most recently amended at the October 30, 2023 Board meeting, to update selected retirement rate assumptions pursuant to the passage of Senate Bill 75 for the June 30, 2023 valuation. The PEERS funding policy was unchanged. The long-term inflation assumption has been re-evaluated each year since the experience study due to overall elevated inflation, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in

recent years. A large amount of data was considered including the abnormal volatility of recently observed inflation and the unprecedented efforts by the Federal Reserve Open Market Committee to reduce inflation. Based on this information, the current long-term inflation assumption and the related COLA assumption were not adjusted.

Based on the results of the actuarial valuations, inflation analysis, and sensitivity analysis, the Board of Trustees did not make any amendments to the Systems' Actuarial Funding Policies during the current year. The purpose of the policies is to record the funding objectives and policies set by the Board of Trustees for the Systems. The Board established the policies to ensure the systematic funding of future benefit payments for the Systems' current and future members. The policies include the Board's Principles of Funding and Risk Factors that must be considered. The policies govern the methods used by the actuarial consultants in performing the actuarial valuations which are the basis for the determination of the annual contribution rates charged to employers and members.

The Board of Trustees funding goals are: 1. Provide for the security and financial stability of the Systems, including maintaining at least an 80% pre-funded ratio, continuing to amortize the unfunded liability until PSRS/PEERS is 100% pre-funded, and allowing for a reasonable assumed rate of return given capital market estimates, 2. Maintain the contribution rates of both Systems at or below current levels, and 3. Provide a consistent Cost-of-Living Adjustment (COLA) for PSRS/PEERS benefit recipients to maintain their purchasing power, noting COLAs should be dependable and affordable without harming the financial stability of the Systems. The Board of Trustees funding goals are in direct alignment with the Systems' mission, goals, and strategic plan.

The Systems are statutorily required to have an actuarial audit at least every 10 years. Due to the significance of the actuarial relationship and for strong governance, the Systems conduct an actuarial audit every five years. The Systems recently completed an actuarial audit that included a full replication of the June 30, 2023 valuations and a review of the most recent actuarial experience studies performed by the Systems' retained actuary, PwC US. The audit concluded that the June 30, 2023 actuarial valuations were reasonable, based on reasonable assumptions and methods and the reports complied with the Actuarial Standards of Practice.

The Systems' funding objective continues to be to achieve a funded ratio of 100% over a closed 30-year period. For this purpose, funded ratio is defined as the actuarial value of assets divided by the actuarial accrued liability determined under the entry age normal cost method and the actuarial assumptions adopted by the Board of Trustees. As of June 30, 2024, PSRS was 87.2% pre-funded, while PEERS was 88.1% pre-funded. The funding status of PSRS increased from the June 30, 2023, funded percentage of 85.9% and PEERS increased from the June 30, 2023, funded percentage of 87.3%. The increase is due to investment returns being greater than assumed, resulting in an increase in the actuarial value of assets of more than 7.3% (actuarially assumed return). This was partially offset by a net loss on the liabilities from individual member salaries increasing more than assumed and a 2.00% COLA on January 1, 2025 for retired members compared to an assumed COLA of 1.35%, less gains on mortality and refinements to the valuation from the actuarial audit just completed. Over time, we expect the annual gains/losses to be offsetting. Additional information on actuarial assumptions and funding can be found in the Actuarial Section of this report. As previously mentioned, based on the June 30, 2024 valuations and overall financial projections, the Board of Trustees set the fiscal year 2026 contribution rates equivalent to the fiscal year 2025 level for both members and employers.

Investment Activities

Overall investment markets continued to experience inflation, high interest rates and geopolitical concerns. U.S. stock markets hit all-time highs throughout fiscal year 2024. The Systems' investments in global stocks was a significant driver of fiscal year 2024 performance, while diversification into other asset classes was largely supportive to overall performance. U.S. stocks returned 23.1% for the fiscal year ended June 30, 2024 (as measured by the Russell 3000 Index), non-U.S. developed stocks moved 11.5% higher (as measured by the MSCI EAFE Index), and emerging market stocks increased 12.6% (as measured by the MSCI Emerging Markets Index). Interest rates continued to increase as the yield on the 10-year Treasury note moved from 3.81% at the beginning of the fiscal year to 4.36% on June 30, 2024. This increase in yield muted total returns for bonds as the Bloomberg U.S. Treasury Index increased 1.6% in fiscal year 2024. The Systems' non-traditional asset classes (private equity, private credit, private real estate and hedged assets) provided mostly positive support to the overall investment return in fiscal year 2024, but more importantly continue to deliver excellent long-term results and diversification. The Systems' diversified portfolio resulted in fiscal year 2024 total fund performance of 10.8% (10.6% net of all investment expenses and fees). The total fund return was significantly above the long-term investment goal (actuarially assumed return) of 7.3%.

Transmittal Letter, continued

The total plan return, net of all investment expenses and fees, fell short of the policy benchmark return for the fiscal year. Over long periods of time, the Systems continue to produce investment returns that meet or exceed the Systems' objectives. For the 10-year time period ended June 30, 2024, the total plan return exceeded the policy benchmark return by 130 basis points. The Systems' internal investment staff and external investment managers added value above the policy benchmark of over $6.5 billion net of all fees and expenses over the last 10 years. The annualized investment return for the Systems is 8.1% (7.9% net of all investment expenses and fees) over the last 30 years.

Additional detailed information regarding the Systems' investments, including asset allocation, policies, and strategies, can be found in the Investment Section of this report.

Legislative Changes During Fiscal Year 2024

During the fiscal year, the General Assembly passed legislation (SS#2 SCS SB 727), referred to as Senate Bill 727. Governor Michael L. Parson signed the legislation on May 7, 2024. Senate Bill 727 enacted the following change to the working after retirement provisions for both PSRS and PEERS:

- If a retired member returns to work and exceeds the statutory limitations that trigger a suspension of the member's retirement allowance, then in any month in which limitations are exceeded the member shall not be eligible to receive their retirement allowance, or the System shall recover the amount earned in excess of the limitations, whichever is less.

The change in working after retirement is largely an administrative change to be less punitive for members that work slightly more than the limits and is assumed to have no financial impact on the Systems.

In addition, though not an amendment to the statutory benefit provisions of PSRS, Senate Bill 727 also enacted changes to the minimum teacher's salary which may impact the pensionable salary of some members. The impact of the increase in minimum teacher's salary is expected to be minimal.

Other Key Initiatives During Fiscal Year 2024

The Systems are currently focused on multi-year information technology projects, including enhancements to the pension administration system, expansion of internal platforms to administer the full life cycle of all investment asset classes and a continued focus on security. During the current fiscal year, the Systems completed the opening of a secondary office in St. Louis to meet the needs of an expanded investment opportunity set within private markets. The secondary office is expected to facilitate enhanced investment staff recruitment/retention and long-term succession planning.

Awards

Public Pension Coordinating Council (PPCC), Public Pension Standards Award

PSRS and PEERS each received the Public Pension Standards Awards in 2024 in recognition of meeting professional standards for plan administration and plan funding as set forth in the Public Pension Standards of the PPCC. These awards are presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to PSRS and PEERS for the ***Annual Comprehensive Financial Report*** for the fiscal year ended June 30, 2023. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized ***Annual Comprehensive Financial Report.*** This report must satisfy both generally accepted accounting principles, applicable legal requirements and GFOA standards. A Certificate of Achievement is valid for a period of one year only. We believe our

current ***Annual Comprehensive Financial Report*** continues to meet the Certificate of Achievement program requirements and we are submitting it to GFOA to determine eligibility for another certificate.

Best Places to Work in Money Management

PSRS/PEERS was recognized by Pension & Investments (P&I) magazine as one of the "Best Places to Work in Money Management" for 2023. Winners of the annual award were selected based on the results of employee surveys conducted by P&I and Best Companies Group, a research firm specializing in identifying great places to work. P&I's annual survey and recognition program are dedicated to honoring the best employers in the money management industry. PSRS/PEERS are among a small group of public pension funds to have received the award.

Professional Services

Certain professional services are provided to the Systems by retained consultants. The required opinion letters from two of those consultants, PwC US, actuaries, and Williams Keepers LLC, independent certified public accountants, are contained elsewhere in this report.

General investment consulting services have been provided by Russell Investments.

Acknowledgments

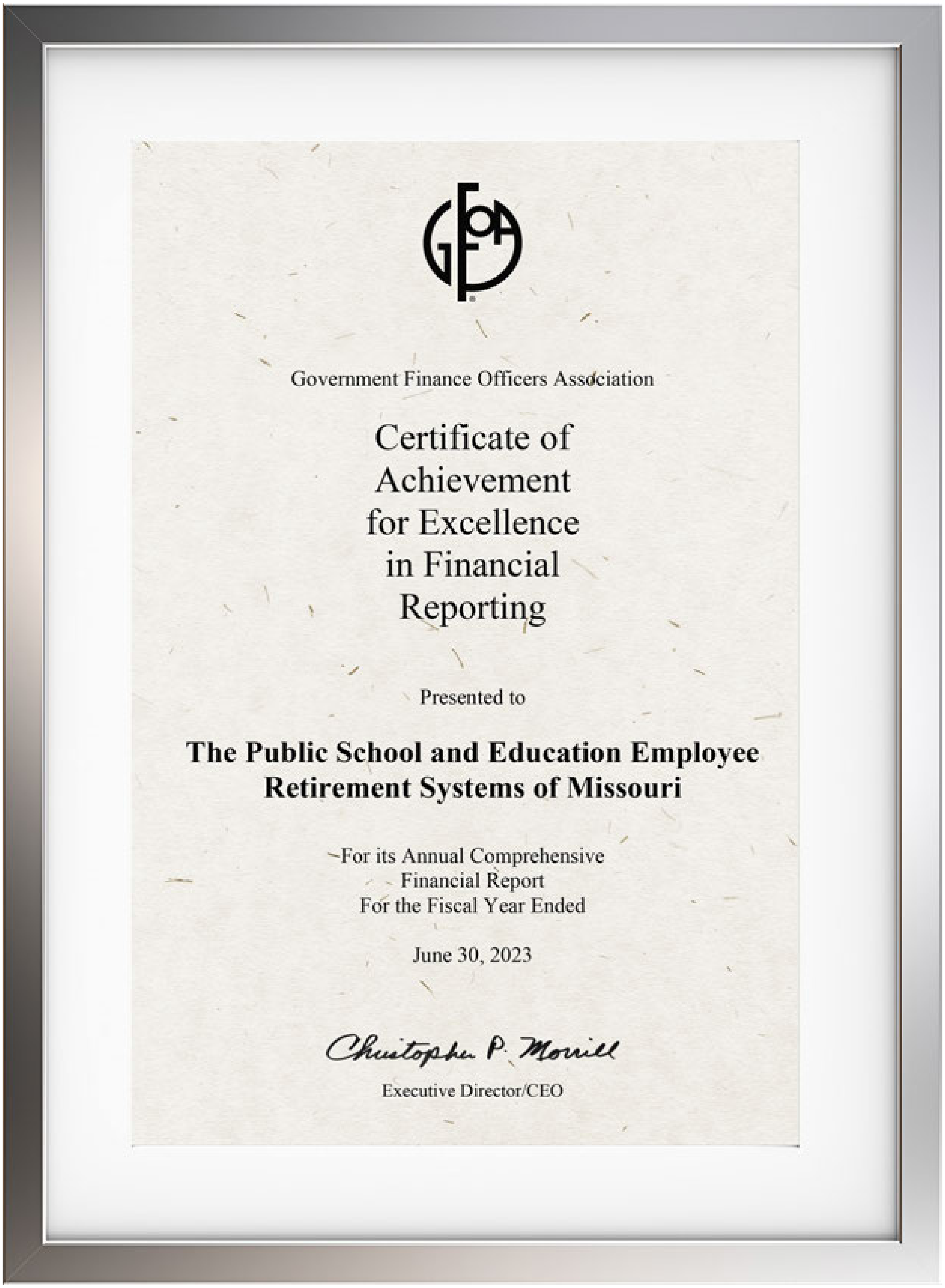
Each fiscal year we welcome a new group of young professionals to our membership and congratulate a new group of retirees as they begin their next chapter. Our continuing ***evolution*** means we are always searching for ways to improve our technology, service, communications, and investment strategies to best serve our members' current and future needs. We are grateful to have the opportunity to serve each and every member. We would like to express our thanks and gratitude to the Board of Trustees, staff and consultants who have worked diligently to produce this report and to ensure the continued successful operation of the Systems.

Respectfully submitted,

Dearld Snider
Executive Director

Anita Brand, CPA
Chief Financial Officer

Certificate of Achievement for Excellence in Financial Reporting



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

The Public School and Education Employee Retirement Systems of Missouri

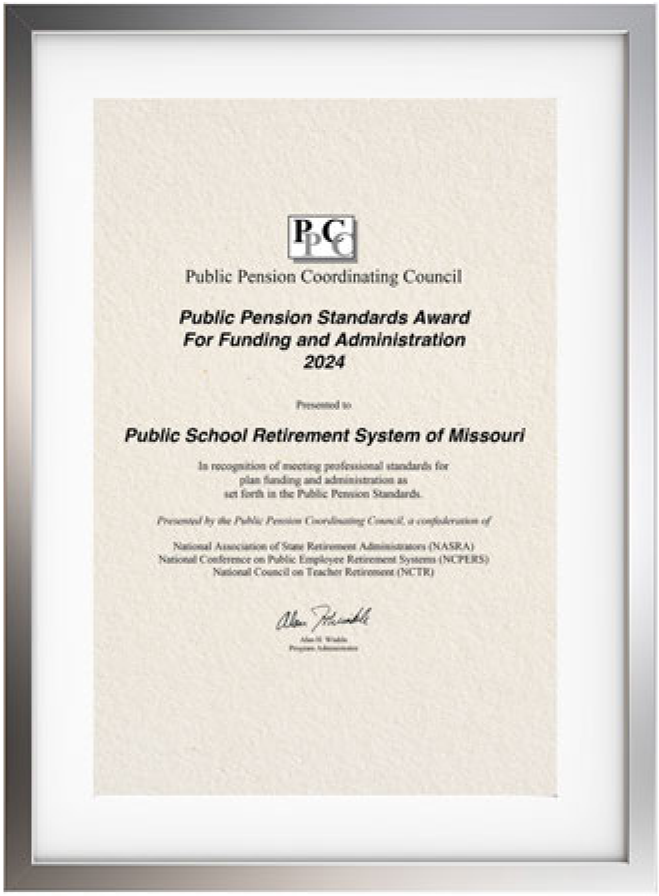
For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

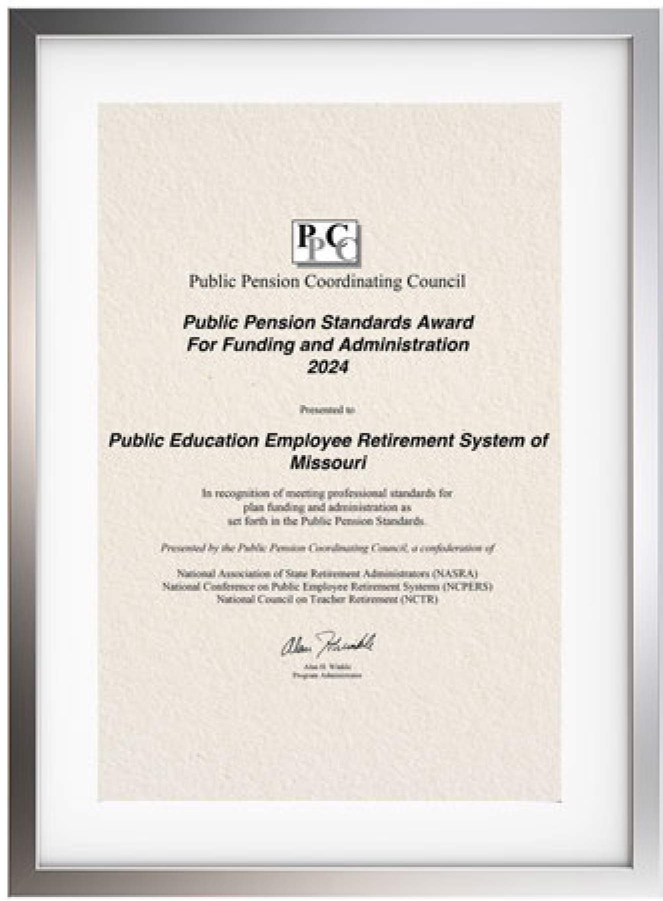
June 30, 2023

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council Public Pension Standards Awards





Professional Services

As of June 30, 2024

Actuaries

PwC US
Chicago, Illinois
New York, NY

Auditors

Williams Keepers, LLC
Columbia, Missouri

Legal Counsel

Chapman and Cutler, LLP
Chicago, Illinois

Groom Law Group
Washington, D.C.

Pillsbury, Winthrop, Shaw, Pittman, LLP
Los Angeles, California

Thompson Coburn, LLP
St. Louis, Missouri

Legislative Consultant

Clarkston Nelson, LLC
Jefferson City, Missouri

Insurance Consultants

Charlesworth & Associates
Overland Park, Kansas

The Insurance Group
Columbia, Missouri

Technology Consultants

Arctic Wolf Networks
Eden Prairie, MN

CherryRoad Technologies
Parsippany, New Jersey

DAS
Palm Beach Gardens, FL

Dell EMC
Jefferson City, MO

The Entertainer
Jefferson City, MO

Gartner, Inc.
Stamford, CT

Microsoft Unified Support Microsoft Corporation
Redmond, WA

Network Technology Partners
Ellisville, MO

Palo Alto Networks
Santa Clara, CA

Securitas Technology
St. Louis, MO

Secure Data Technologies
O'Fallon, IL

SHI International
Somerset, NJ

Trimarc Security
Washington, DC

Medical Advisor

Managed Medical Review Organization
Novi, Michigan

Investment Management, Custodial and Consulting fees can be found in the Schedule of Investment Expenses on page 107. Schedules of broker commissions can be found on page 105. Additional information on Investment Managers can also be found in the Investment Section of this report.

Evolve

The difference between change and evolution

It is easy to change when the situation demands it. Evolutionary behavior takes a more determined and structured approach. It involves a slower process of improvement that develops over time into a better, more complex and more advanced state. As an organization we continue to evolve our processes and our thinking.

Financial Section

Independent Auditor's Report

WILLIAMS KEEPERS LLC
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

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OFFICE (573) 442-6171 FAX (573) 777-7800
3220 West Edgewood, Suite E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240
www.williamskeepers.com

The Board of Trustees of the
Public School and Public Education Employee
Retirement Systems of Missouri

Opinions

We have audited the statements of fiduciary net position of the Public School and Public Education Employee Retirement Systems of Missouri (the Systems), as of June 30, 2024, and the related statements of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Systems' basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the fiduciary net position of the Public School and Public Education Employee Retirement Systems of Missouri as of June 30, 2024, and the changes in fiduciary net position for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Systems and to meet our ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Systems' ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

American Institute of Certified Public Accountants | Missouri Society of Certified Public Accountants | Member, Allinial Global

Independent Auditor's Report, continued

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Systems' internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Systems' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 21-27, schedules related to the defined benefit plans (schedules of changes in the employers' net pension liability, employers' net pension liability, employer contributions, investment returns, and notes to schedules) on pages 52-57, and schedules related to the defined benefit OPEB plan (schedule of changes in the net OPEB liability and related ratios) on page 58 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context.

We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Systems' basic financial statements. The introductory, investment, actuarial and statistical sections and the schedules of administrative expenses, schedules of professional services, and schedules of investment expenses presented on pages 59 through 60 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The additional information on pages 59 through 60 is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the additional information presented on pages 59 through 60 is fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements.

Williams-Keepers LLC

Columbia, Missouri
December 4, 2024

Management's Discussion and Analysis

Introduction

This discussion and analysis of the financial position of the Public School Retirement System of Missouri (PSRS) and the Public Education Employee Retirement System of Missouri (PEERS), collectively referred to as the Systems, provides an overview of the Systems' financial activities for the fiscal year ended June 30, 2024. We encourage you to consider the information presented here in conjunction with the *Transmittal Letter* included in the *Introductory Section* and the financial statements and other information presented in the *Financial Section* of this *Annual Comprehensive Financial Report* (ACFR).

Financial Highlights

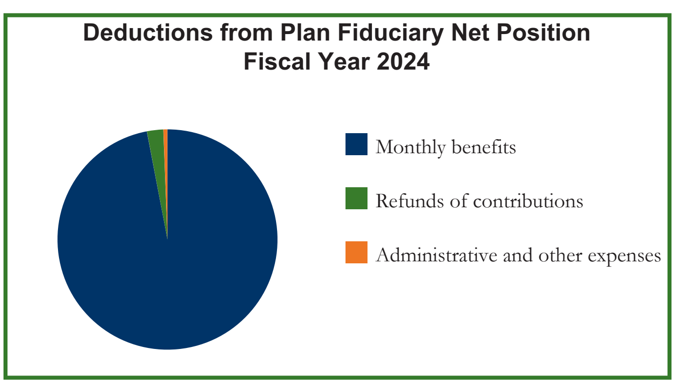
The following highlights are explained in more detail for each System later in this discussion.

- The Board of Trustees adopts actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience for the Systems, derived from experience studies conducted every fifth year. The most recent comprehensive experience studies were completed during fiscal year 2021. All economic and demographic assumptions were reviewed and updated, where appropriate, based on the results of the studies and effective with the June 30, 2021 valuations. The PSRS funding policy was most recently amended at the October 30, 2023 Board meeting, to update selected retirement rate assumptions pursuant to the passage of Senate Bill 75 for the June 30, 2023 valuation. The PEERS funding policy was unchanged. The significant actuarial assumptions are detailed in the notes to the financial statements and the notes to the schedules of required supplementary information. The next experience studies are scheduled to occur during fiscal year 2026.
- The Systems are statutorily required to have an actuarial audit at least every 10 years. Due to the significance of the actuarial relationship and for strong governance, the Systems conduct an actuarial audit every five years. The Systems recently completed an actuarial audit that included a full replication of the June 30, 2023 valuations and a review of the most recent actuarial experience studies performed by the Systems' retained actuary, PwC US. The audit concluded that the June 30, 2023 actuarial valuations were reasonable, based on reasonable assumptions and methods and the reports complied with the Actuarial Standards of Practice.
- As of June 30, 2024, PSRS' fiduciary net position as a percentage of the total pension liability increased to 88.3% from 85.4% for the prior year. PSRS' net pension liability approximated $6.9 billion as of June 30, 2024. As of June 30, 2024, PEERS' fiduciary net position as a percentage of the total pension liability increased to 89.0% from 86.5% for the prior year. PEERS' net pension liability approximated $862.0 million as of June 30, 2024. The net pension liability is calculated utilizing the fair value of assets in accordance with Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans,* as amended*,* for accounting presentation purposes.
- The pre-funded status of the Systems is measured as the ratio of assets available for benefits to a benefit liability measure for the Systems. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to the Systems' funding policies is the actuarial accrued liability (AAL) computed in accordance with assumptions and methods approved by the Board of Trustees. The pre-funded ratio uses the actuarial value of assets (AVA), a smoothed asset value that recognizes 20% of the total investment gain or loss on the AVA for each of the preceding five years. This is the significant difference between accounting measurements in accordance with GASB Statement No. 67 and funding calculations. As of June 30, 2024, the pre-funded ratios for funding purposes were 87.2% for PSRS and 88.1% for PEERS. In general, this means that for each dollar of future pension liability, PSRS and PEERS have accumulated approximately $0.87 and $0.88, respectively, to meet that obligation. To fully understand the funding status of a retirement system, it is advisable to view the actuarial data in conjunction with financial data.

- U.S. stock markets hit all time highs throughout fiscal year 2024. During fiscal year 2024, investment markets continued to experience inflation, high interest rates and geopolitical concerns. The Systems' diversified portfolio resulted in fiscal year 2024 total fund performance of 10.8% (10.6% net of all investment expenses and fees). The total fund return was significantly above the long-term investment goal (actuarially assumed return) of 7.3%. However, the total plan return, net of all investment expenses and fees, fell short of the policy benchmark return for the fiscal year. Over long periods of time, the Systems continue to produce investment returns that meet or exceed the Systems' objectives. For the 10-year time period ended June 30, 2024, the total plan return exceeded the policy benchmark return by 130 basis points. The Systems' internal investment staff and external investment managers added value above the policy benchmark of over $6.5 billion, net of all fees and expenses, over the last 10 years. The annualized investment return for the Systems is 8.1% (7.9% net of all investment expenses and fees) over the last 30 years.
- The Systems' investment returns for the last five-year and ten-year time periods exceeded 74% of the peer group as defined by the Wilshire TUCS universe of public pension plans with assets in excess of $1 billion. Additionally, the Systems generated the consistently higher returns while taking substantially less risk than the policy benchmark (as measured by standard deviation) and less risk than most comparable public funds over all time periods.
- Cost-sharing, defined-benefit retirement systems such as the Systems have a long-term perspective on financial activities. The Systems' primary responsibility is to ensure that sufficient funds will be available to provide retirement, disability and survivor benefits to current and future members. Condensed Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position are provided for each System on the following pages.
- Pension benefits are funded through a combination of member and employer contributions and investment income. Approximately, 63% of every dollar used to pay retirees is generated from investment earnings (based on a twenty-five year average for fiscal years 2000-2024).

Note: The 19 cents includes member contributions and service purchases.

- Expenses are incurred for the sole purpose for which the Systems were created: the payment of benefits to the Systems' membership and their beneficiaries. Included in the deductions from fiduciary net position were monthly benefit payments, refunds of contributions due to member terminations or deaths, and administrative and other expenses. The pie chart depicts the combined Systems' deductions from Plan Fiduciary Net Position for the year ended June 30, 2024.



- The combined net position of the Systems increased by $3.8 billion. The net position of PSRS increased by $3.2 billion while the net position of PEERS increased by $545.4 million.
- Total revenues for fiscal year 2024 were comprised of contribution revenue of $2.01 billion and investment gains of $5.69 billion, compared to contribution revenue of $1.93 billion and investment gains of $3.22 billion for fiscal year 2023.
- Expenses increased 5.5% over the prior year from $3.7 billion to $3.9 billion. Retirement benefits increased by $198.4 million and member refunds increased by $6.1 million from the prior year, while administrative expenses increased by $1.1 million during the same time period.

Overview of the Financial Statements

The ACFR reflects the activities of the Systems as reported in Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position (the Systems' financial statements). The Systems' financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as amended. This discussion and analysis are intended to serve as an introduction to the financial section of the ACFR. The financial section of the ACFR consists of the basic financial statements comprised of the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position, the notes to the basic financial statements, required supplementary information and other supplementary information.

The Statements of Fiduciary Net Position present information on the Systems' assets, deferred outflows, liabilities, deferred inflows and resulting net position, where assets plus deferred outflows less liabilities and deferred inflows is reported as net position. The net position of the Systems reflects the resources available to pay benefits to members when due. Over time, increases and decreases in net position measure whether the Systems' financial position is improving or deteriorating.

The Statements of Changes in Fiduciary Net Position present information detailing the changes in net position that occurred during the current fiscal year. All changes in net position are reported on an accrual basis. This means that the revenue or expense is recognized as soon as the underlying event giving rise to the change occurs, regardless of when the actual cash is received or paid. Thus, revenues and expenses are reported in this statement for some items that will not result in cash flows until future fiscal periods. For example, contributions due from an employer, even though not yet paid by year end, will be reflected as revenue. Earned vacation accruals will be reflected as an expense, even though they have not been paid to employees.

The notes to the financial statements provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes can be found on pages 30 through 51.

The report also contains required supplementary information in addition to the basic financial statements themselves. The required supplementary information consists of the following schedules and related notes:

- The Schedules of Changes in the Employers' Net Pension Liability include historical trend information about the annual changes of the net pension liability, including assumption changes and variances of assumed experience.
- The Schedules of Employers' Net Pension Liability include historical trend information about whether each System's net position is increasing or decreasing over time relative to the total pension liability. The schedules provide a long-term, ongoing perspective of the accumulation of assets to pay benefits when due.
- The Schedules of Employer Contributions present historical trend information about the actuarially determined contributions of employers and the actual contributions made by employers.
- The Schedules of Investment Returns present historical annual money-weighted rate of returns.
- The Schedules of Changes in the OPEB Liability and Related Ratios include historical trend information about the defined benefit other post-employment benefit (OPEB) plan from a long-term, ongoing perspective.
- The Notes to the Schedules of Required Supplementary Information provide additional information that is essential to a full understanding of the data provided in the schedules.

Other supplementary schedules are also included. The Schedules of Administrative Expenses present the overall cost of administering the Systems. The Schedules of Professional Services further detail this category of administrative expense. The Schedules of Investment Expenses show the costs associated with investing the assets of the Systems. These expenses are shown as a reduction of revenue on the Statements of Changes in Fiduciary Net Position.

Financial Analysis of the Public School Retirement System of Missouri (PSRS)

PSRS is a mandatory cost-sharing multiple employer retirement system for full-time certificated employees and certain part-time employees of participating employers. PSRS members were required to contribute 14.5% of their annual covered salary during fiscal year 2024. The employer was required to match that amount. Most PSRS members do not contribute to Social Security, except for employees hired after 1986 who contribute to Medicare only. In some instances, positions may be determined not to be exempt from Social Security contributions. PSRS members required to contribute to Social Security are required to contribute two-thirds of the approved PSRS contribution rate and their employer is required to match the contribution. The members' benefits are further calculated at two-thirds the normal benefit amount.

Public School Retirement System of Missouri
Fiduciary Net Position (000's)

	2024	2023	Change
Cash & investments	$ 52,430,601	$ 48,966,567	$ 3,464,034
Receivables	1,510,490	1,109,794	400,696
Other	31,194	33,251	(2,057)
Total assets	**53,972,285**	**50,109,612**	**3,862,673**
Deferred outflows of resources	**569**	**127**	**442**
Total liabilities	**1,923,826**	**1,275,810**	**648,016**
Deferred inflows of resources	**670**	**821**	**(151)**
Fiduciary net position	**$ 52,048,358**	**$ 48,833,108**	**$ 3,215,250**

Assets

Total assets of PSRS as of June 30, 2024 were $54.0 billion and were mostly comprised of cash, investments, investment sales receivables and contributions due from employers. Total assets increased by $3.9 billion or 7.7% from the prior year due to investment earnings.

Liabilities

Total liabilities as of June 30, 2024, were $1.9 billion and were mostly comprised of payables from the purchase of investments. Total liabilities increased by $0.6 billion from the prior year. The increase was due to a significant increase in investment purchase payables at year-end.

Deferred Outflows and Inflows of Resources

Deferred inflows and outflows are a result of the System's Post-Employment Healthcare Plan and are presented in accordance with GASB Statement No. 75.

Net Position

PSRS assets and deferred outflows exceeded liabilities and deferred inflows on June 30, 2024, by $52.0 billion. This was an increase of $3.22 billion from the 2023 net position. The increase was due to current year investment earnings previously discussed. Investment gains totaled $5.02 billion for the year. In addition, benefit payments and other expenses exceeded contribution revenue by $1.81 billion, as expected in a mature defined benefit plan.

Public School Retirement System of Missouri
Changes in Fiduciary Net Position (000's)

	2024	2023	Change
Additions			
Member contributions	$ 858,834	$ 832,155	$ 26,679
Employer contributions	819,926	792,647	27,279
Investment income	5,020,947	2,842,458	2,178,489
Other	22	64	(42)
Total additions	**6,699,729**	**4,467,324**	**2,232,405**
Deductions			
Monthly benefits	3,401,298	3,229,700	171,598
Refunds of contributions	69,849	62,610	7,239
Administrative expenses	13,327	12,957	370
Other	5	4	1
Total deductions	**3,484,479**	**3,305,271**	**179,208**
Net increase	**3,215,250**	**1,162,053**	**2,053,197**
Fiduciary net position - beginning of year	**48,833,108**	**47,671,055**	**1,162,053**
Fiduciary net position - end of year	**$ 52,048,358**	**$ 48,833,108**	**$ 3,215,250**

Revenues – Additions to Fiduciary Net Position

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and through investment earnings. Total contribution revenue for the year increased by $54.0 million to $1.7 billion. This was a 3.3% increase over the prior year. Retirement contributions were calculated at 14.5% of retirement salary for each member during fiscal year 2024. The employer matched this amount. Contribution rates were unchanged from the prior year. An increased retirement

salary base and the addition of new members resulted in the increase in contributions.

The net investment gain was $5.02 billion as compared to a net investment gain of $2.84 billion in 2023. The current year gains are reflective of a 10.6% net return on the Systems' diversified investment portfolio, compared to net investment gains of 6.2% in the prior year. All investment related expenses, such as fees paid to investment managers and internal staff expenses, are reflected as a reduction in revenue and are accounted for in this net figure. The *Investment Section* of this report contains additional information regarding the investment portfolio and related activity.

Expenses – Deductions from Fiduciary Net Position

The primary expenses of PSRS include the payment of pension benefits to members and beneficiaries, refunds of contributions to former members, and the cost of administering the System. Total expenses for fiscal year 2024 were $3.5 billion, an increase of 5.4% over fiscal year 2023. The overall increase was directly related to the System's mission of providing retirement benefits to Missouri educators. Benefit increases represented 99.8% of the overall increase in expenses.

Monthly benefit expenses increased by $171.6 million to $3.4 billion. This was a result of an overall increase of 1,709 monthly benefit recipients from the prior year-end and eligible benefit recipients receiving a 2.0% cost-of-living increase on January 1, 2024 and a 5.0% increase on January 1, 2023. Senate Bill 75 passed during the prior fiscal year and provides for a 2.55% benefit factor for PSRS members who have 32 or more years of service at retirement. This change was effective with retirements after August 28, 2023. There were no other changes to the benefit formula for payments during 2024. Refunds of contributions increased by $7.2 million during the current year to a total of $69.8 million.

Administrative expenses increased by $0.4 million to $13.3 million. The marginal increase was due to the addition of staff and merit allocations to existing staff. These increases were offset by a decrease in other administrative expenses including, professional services, communications expense and office expense. The cost of administrative items was charged 58% to PSRS and 42% to PEERS for the fiscal year (59% for PSRS and 41% for PEERS during fiscal year 2023) unless the expense was determined to be of direct benefit to only one System. In such instance, the allocation of expense was 100% to the benefited System. As always, we will continue to look for ways to streamline costs when prudent.

Financial Analysis of the Public Education Employee Retirement System of Missouri (PEERS)

PEERS is a mandatory cost-sharing multiple employer retirement system for non-certificated employees and certain part-time certificated employees of participating employers. PEERS members were required to contribute 6.86% of their annual covered salary during fiscal year 2024. The employer was required to match that amount. PEERS members also contribute to Social Security.

Public Education Employee Retirement System of Missouri
Fiduciary Net Position (000's)

	2024	2023	Change
Cash & investments	$ 7,004,988	$ 6,426,267	$ 578,721
Receivables	202,839	146,814	56,025
Total assets	**7,207,827**	**6,573,081**	**634,746**
Deferred outflows of resources	**412**	**89**	**323**
Total liabilities	**259,607**	**169,866**	**89,741**
Deferred inflows of resources	**485**	**571**	**(86)**
Fiduciary net position	**$ 6,948,147**	**$ 6,402,733**	**$ 545,414**

Assets

Total assets of PEERS as of June 30, 2024 were $7.2 billion and were mostly comprised of cash, investments, investment sales receivables and contributions due from employers. Total assets increased by $0.6 billion or 9.6% from the prior year due to investment earnings.

Liabilities

Total liabilities as of June 30, 2024 were $259.6 million and were mostly comprised of payables from the purchase of investments. Total liabilities increased by $89.7 million. The increase was due to a significant increase in investment purchase payables at year-end.

Deferred Outflows and Inflows of Resources

Deferred inflows and outflows are a result of the System's Post-Employment Healthcare Plan and are presented in accordance with GASB Statement No. 75.

Net Position

PEERS assets and deferred outflows exceeded liabilities and deferred inflows on June 30, 2024 by $6.9 billion. This was an increase of $545.4 million from the 2023 net position. The increase was due to current year investment earnings previously discussed. Investment income totaled $667.1 million for the year offset by benefit payments and other expenses which exceeded contribution revenue by $121.7 million, as expected in a mature defined benefit plan.

Public Education Employee Retirement System of Missouri
Changes in Fiduciary Net Position (000's)

	2024	2023	Change
Additions			
Member contributions	$ 169,864	$ 156,402	$ 13,462
Employer contributions	162,778	147,464	15,314
Investment income	667,097	373,198	293,899
Other	—	4	(4)
Total additions	**999,739**	**677,068**	**322,671**
Deductions			
Monthly benefits	420,719	393,909	26,810
Refunds of contributions	24,234	25,363	(1,129)
Administrative expenses	9,328	8,646	682
Other	44	7	37
Total deductions	**454,325**	**427,925**	**26,400**
Net increase	**545,414**	**249,143**	**296,271**
Fiduciary net position - beginning of year	**6,402,733**	**6,153,590**	**249,143**
Fiduciary net position - end of year	**$ 6,948,147**	**$ 6,402,733**	**$ 545,414**

Revenues – Additions to Fiduciary Net Position

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and through investment earnings. Total contribution revenue for the year increased by $28.8 million to $332.6 million. This was a 9.5% increase over the prior year. Retirement contributions were calculated at 6.86% of retirement salary for each member during fiscal year 2024. The employer matched this amount. Contribution rates were unchanged from the prior year. The increase in total contributions is attributable to a higher retirement salary base and the addition of new members.

The net investment gain was $667.1 million as compared to a net investment gain of $373.2 million in 2023. The current year gains are reflective of a 10.6% net return on the Systems' diversified investment portfolio, as compared to net gains of 6.2% in the prior year. All investment related expenses, such as fees paid to investment managers and internal staff expenses, are reflected as a reduction in revenue and are accounted for in this net figure. The *Investment Section* of this report contains additional information regarding the investment portfolio and related activity.

Expenses – Deductions from Fiduciary Net Position

The primary expenses of PEERS include the payment of pension benefits to members and beneficiaries, refunds of contributions to former members, and the cost of administering the System. Total expenses for fiscal year 2024 were $454.3 million, an increase of 6.2% over fiscal year 2023. The overall increase was directly related to the System's mission of providing retirement benefits to Missouri education employees. Benefit increases represented 97.3% of the overall increase in expenses.

Monthly benefit expenses increased by $26.8 million to $420.7 million. This was a result of an overall increase of 1,248 monthly benefit recipients from the prior year-end and eligible benefit recipients receiving a 2.0% cost-of-living increase on January 1, 2024 and a 5.0% increase on January 1, 2023. There were no changes to the benefit formula during 2024. Refunds of contributions decreased by $1.1 million from the prior year.

Administrative expenses increased by $0.7 million. The marginal increase was due to the addition of staff and merit allocations to existing staff. These increases were offset by a decrease in other administrative expenses including professional services, communications expense and office expense. The cost of administrative items was charged 58% to PSRS and 42% to PEERS for the fiscal year (59% for PSRS and 41% for PEERS during fiscal year 2023) unless the expense was determined to be of direct benefit to only one System. In such instance, the allocation of expense was 100% to the benefited System. As always, we will continue to look for ways to streamline costs when prudent.

Summary

The Board of Trustees, management and staff are dedicated to keeping the Systems strong today and well into the future and continually strive to improve the financial position of the Systems through sound governance processes, comprehensive funding policies, a prudent investment program, and long-term strategic planning. The positive impacts of the Systems' dedication and overall implementation of each of these

programs is illustrated in the strong fiscal year 2024 financial, investment and actuarial results, as well as the years leading up to fiscal year 2024.

The Board of Trustees set the fiscal year 2026 contribution rates the same as fiscal year 2025 rates at their October 28, 2024 meeting. This was the fifteenth year for the Board of Trustees to set the contribution rate at 29.0% for PSRS and 13.72% for PEERS. This consistency in contribution rates illustrates significant financial stability, strong governance and long-term planning.

The fiscal year 2026 contribution rates are in compliance with the PSRS/PEERS Board of Trustees' Funding Policies and represent the continued stability of contribution rates for employers and members.

The Systems' funding objective continues to be to achieve a funded ratio of 100% over a closed 30-year period. For this purpose, funded ratio is defined as the actuarial value of assets divided by the actuarial accrued liability determined under the entry age normal cost method and the actuarial assumptions adopted by the Board. The actuarial value of assets recognizes investment gains or losses over a period of five years to manage market volatility. Detailed information regarding the Systems' actuarial assumptions is included in the *Actuarial Section* of this report.

The Board of Trustees revised the Actuarial Funding Policies at their June 8, 2021 Board meeting based on results of actuarial experience studies conducted during fiscal year 2021. All economic and demographic assumptions were reviewed and updated, where appropriate, based on the results of the studies and the revisions were effective with the June 30, 2021 valuations. The PSRS funding policy was most recently amended at the October 30, 2023 Board meeting, to update selected retirement rate assumptions pursuant to the legislation enacted during fiscal year 2023 that provides for a 2.55% benefit factor for PSRS members with 32 or more years of service. The PEERS funding policy was unchanged.

The economic factors of primary significance to the Systems is the investment rate of return earned in global capital markets and the overall impact of inflation on cost-of-living adjustments. Legislative, demographic, and actuarial assumption changes can also have a significant impact on the funded status of the Systems. All these factors are incorporated into the annual actuarial valuations, which determine the contribution rates at which participating employers must contribute in order to appropriately fund benefits.

The actuarial assumed rate of return was 8.0% from 1980 through fiscal year 2016. The Board of Trustees reduced the actuarial assumed rate of return to 7.75%, effective with the June 30, 2016 actuarial valuations and fiscal year 2017 investment performance measurement. The Board of Trustees has continually considered the funded status of the Systems, expectations of capital markets and other factors. Based on these considerations the Board of Trustees reduced the risk profile of the plans with further reductions of the actuarial assumed rate of return as of June 30, 2017 (7.6%) and June 30, 2018 (7.5%). As part of the fiscal year 2021 actuarial experiences studies, the Board of Trustees further reduced the risk profile by adopting a new actuarial assumed rate of return of 7.3%. The long-term investment objective of 7.3% was effective with the June 30, 2021 actuarial valuations and fiscal year 2022 investment performance measurement.

The Systems earned an investment return of 10.8% (10.6% net of all investment expenses and fees). The Systems' investment portfolio is well-diversified and structured to provide downside protection during volatile investment markets. Due to the long-term nature of defined benefit pension plans, it is important to look at the financial performance of the Systems over a period of years and not just at this single point in time. Over long periods of time, the Systems continue to produce investment returns that meet or exceed the Systems' objectives. For the 10-year time period ended June 30, 2024, the total plan return exceeded the policy benchmark return by 130 basis points. The Systems' internal investment staff and external investment managers added value above the policy benchmark of over $6.5 billion, net of all fees and expenses, over the last 10 years. Additionally, the annualized investment return for the Systems over the last 30 years is 7.9%, net of all fees and expenses. Detailed information regarding the Systems' investment portfolio is included in the *Investment Section* of this report.

Requests for Information

This financial report is designed to provide the Board of Trustees, our members, and other users of our financial report with a general overview of the Systems' finances and to demonstrate the Systems' accountability for the money it receives. If you have any questions about this report or need additional financial information, contact PSRS/PEERS, P.O. Box 268, Jefferson City, MO 65102.

Public School Retirement System of Missouri
Public Education Employee Retirement System of Missouri
Statements of Fiduciary Net Position

as of June 30, 2024
with comparative totals for June 30, 2023

			Combined Totals	
	PSRS	**PEERS**	**June 30, 2024**	**June 30, 2023**
ASSETS				
Cash - operating	$ 729,351,751	$ 108,107,720	$ 837,459,471	$ 568,861,417
Receivables				
Contributions	213,191,991	30,094,086	243,286,077	219,180,795
Accrued interest and dividends	107,034,222	14,284,742	121,318,964	96,153,305
Investment sales	1,188,782,760	158,460,338	1,347,243,098	940,484,453
Receivable from PEERS for allocated expenses	1,156,176	—	1,156,176	778,610
Other	324,760	2	324,762	11,013
Total receivables	1,510,489,909	202,839,168	1,713,329,077	1,256,608,176
Investments, at fair value				
Cash and short-term investments	1,091,532,024	146,872,360	1,238,404,384	1,175,596,288
U.S. Treasuries and TIPS	7,117,129,229	949,452,068	8,066,581,297	7,969,227,878
U.S. public equities	13,842,471,669	1,845,995,796	15,688,467,465	13,691,249,481
Non-U.S. public equities	9,085,194,886	1,211,996,253	10,297,191,139	9,244,364,751
Private equity	9,010,483,635	1,202,032,736	10,212,516,371	9,914,799,760
Private credit	2,779,930,217	370,853,248	3,150,783,465	2,906,792,864
Private real estate	4,951,228,095	660,512,631	5,611,740,726	5,641,301,731
Hedged assets	3,823,279,875	509,165,231	4,332,445,106	4,280,608,784
Total investments	51,701,249,630	6,896,880,323	58,598,129,953	54,823,941,537
Invested securities lending collateral	—	—	—	31,050
Prepaid expenses	253,865	—	253,865	243,252
Capital assets, net of accumulated depreciation and amortization	30,940,266	—	30,940,266	33,007,317
Total assets	53,972,285,421	7,207,827,211	61,180,112,632	56,682,692,749
DEFERRED OUTFLOW OF RESOURCES				
Outflows related to other post-employment benefit obligations	569,125	412,125	981,250	215,905
LIABILITIES				
Accounts payable and other liabilities	24,579,591	3,085,470	27,665,061	28,809,983
Interest payable	1,778,724	237,289	2,016,013	1,426,664
Securities lending collateral	—	—	—	31,050
Investment purchases	1,890,726,666	252,045,724	2,142,772,390	1,406,200,448
Payable to PSRS for allocated expenses	—	1,156,176	1,156,176	778,610
Lease liability	856,805	—	856,805	902,698
Accrued medical claims	169,360	122,640	292,000	244,000
OPEB liability	2,432,060	1,761,147	4,193,207	3,256,097
Compensated absences	3,282,995	1,198,448	4,481,443	4,025,892
Total liabilities	1,923,826,201	259,606,894	2,183,433,095	1,445,675,442
DEFERRED INFLOW OF RESOURCES				
Inflows related to other post-employment benefit obligations	669,850	485,063	1,154,913	1,391,938
NET POSITION - RESTRICTED FOR PENSIONS	$ 52,048,358,495	$ 6,948,147,379	$ 58,996,505,874	$ 55,235,841,274

See accompanying Notes to the Financial Statements.

Public School Retirement System of Missouri
Public Education Employee Retirement System of Missouri
Statements of Changes in Fiduciary Net Position

for the year ended June 30, 2024
with comparative totals for the year ended June 30, 2023

	PSRS	PEERS	Combined Totals Year Ended June 30, 2024	Combined Totals Year Ended June 30, 2023
ADDITIONS				
Contributions				
Employer	$ 819,926,016	$ 162,777,627	$ 982,703,643	$ 940,110,494
Member	858,833,585	169,864,132	1,028,697,717	988,556,914
Total contributions	1,678,759,601	332,641,759	2,011,401,360	1,928,667,408
Investment income				
From investing activities:				
Net appreciation in fair value of investments	5,020,619,690	662,099,650	5,682,719,340	3,104,143,639
Interest from investments	269,684,444	35,849,745	305,534,189	233,840,642
Interest from bank deposits	929,722	139,908	1,069,630	776,745
Dividends	230,517,327	30,506,842	261,024,169	265,771,886
Total investment income	5,521,751,183	728,596,145	6,250,347,328	3,604,532,912
Less investment expenses	500,813,309	61,500,640	562,313,949	389,184,936
Net income from investing activities	5,020,937,874	667,095,505	5,688,033,379	3,215,347,976
From security lending activities:				
Security lending gross income	3,506	456	3,962	1,131,540
Net appreciation in fair value of security lending collateral	—	—	—	17,744
Less security lending activity expenses:				
Agent fees	2,320	309	2,629	92,521
Broker rebates paid (received)	(8,067)	(1,076)	(9,143)	748,434
Total security lending expenses	(5,747)	(767)	(6,514)	840,955
Net income from security lending activities	9,253	1,223	10,476	308,329
Total net investment income	5,020,947,127	667,096,728	5,688,043,855	3,215,656,305
Other income				
Miscellaneous income	22,584	409	22,993	67,785
Total other income	22,584	409	22,993	67,785
Total additions	6,699,729,312	999,738,896	7,699,468,208	5,144,391,498
DEDUCTIONS				
Monthly benefits	3,401,297,576	420,719,409	3,822,016,985	3,623,609,122
Refunds of contributions	69,849,377	24,233,931	94,083,308	87,971,807
Administrative expenses	13,327,085	9,327,579	22,654,664	21,603,234
Other expenses	4,893	43,758	48,651	11,084
Total deductions	3,484,478,931	454,324,677	3,938,803,608	3,733,195,247
Net increase in net position	3,215,250,381	545,414,219	3,760,664,600	1,411,196,251
NET POSITION - RESTRICTED FOR PENSIONS				
Beginning of year	48,833,108,114	6,402,733,160	55,235,841,274	53,824,645,023
End of year	$ 52,048,358,495	$ 6,948,147,379	$ 58,996,505,874	$ 55,235,841,274

See accompanying Notes to the Financial Statements.

Notes to the Financial Statements

Note 1 – Plan Descriptions

The Board of Trustees of the Public School Retirement System of Missouri administers two separate retirement systems, the Public School Retirement System of Missouri (PSRS) and the Public Education Employee Retirement System of Missouri (PEERS). The Board of Trustees consists of seven members, three of whom are elected PSRS members, one elected member of PEERS and three persons appointed by the governor, one of whom must be a retired member of either PSRS or PEERS.

The funds of the two Systems are managed simultaneously. Investments of the Systems are combined in a commingled investment pool as allowed by state statute. Each System owns an equity position in the pool and receives proportionate investment income from the pool in accordance with their respective ownership percentage. Each System's allocated share of each type of investment in the pool is shown on the Statements of Fiduciary Net Position. Investment gains and losses are reported in the Statements of Changes in Fiduciary Net Position. Each System's assets may be used only for the payment of benefits to the members of the separate System in accordance with the statutes governing that System as well as expenses required to administer the System.

The Public School Retirement System of Missouri (PSRS)

PSRS is a mandatory cost-sharing multiple employer retirement system for all full-time certificated employees and certain part-time certificated employees of all public school districts in Missouri (except the school districts of St. Louis and Kansas City), and all public community colleges. The System also includes certificated employees of PSRS, Missouri State Teachers' Association, Missouri State High School Activities Association, and certain employees of the state of Missouri who elected to remain covered by PSRS under legislation enacted in 1986, 1987 and 1989. The majority of PSRS members are exempt from Social Security contributions. In some instances, positions may be determined not to be exempt from Social Security contributions. Any PSRS member who is required to contribute to Social Security comes under the requirements of Section 169.070 (9) RSMo, known as the "2/3's statute." PSRS members required to contribute to Social Security are required to contribute two-thirds of the approved PSRS contribution rate and their employer is required to match the contribution. The members' benefits are further calculated at two-thirds the normal benefit amount.

PSRS was established as an independent trust fund by the Missouri General Assembly effective August 1, 1945. Statutes governing the System are found in Sections 169.010-169.141 and Sections 169.560-169.595 RSMo. PSRS is a defined benefit plan providing service retirement, death and disability benefits to its members. Members are vested for service retirement benefits after accruing five years of service. Individuals who (a) are at least age 60 and have a minimum of five years of service, (b) have 30 years of service, or (c) qualify for benefits under the "Rule of 80" (service and age total at least 80) are entitled to a monthly benefit for life, which is calculated using a 2.5% benefit factor. Senate Bill 75 (HCS SS SB 75) was passed by the Missouri General Assembly during the 2023 fiscal year and subsequently signed by Governor Parson. Senate Bill 75 provides for a 2.55% benefit factor for PSRS members retiring after August 28, 2023, who have 32 or more years of service at retirement. Between July 1, 2001 and July 1, 2014, PSRS members could retire with a 2.55% benefit factor with 31 or more years of service. Actuarially age-reduced benefits are available for members with five to 24.9 years of service at age 55 or with 25 years of service (if not yet age 55). Members who are younger than age 55 and who do not qualify under the "Rule of 80" but have between 25 and 29.9 years of service may retire with a lesser benefit factor. Members who are three years beyond normal retirement can elect to have their lifetime monthly benefits actuarially reduced in exchange for the right to also receive a one-time partial lump sum (PLSO) payment at retirement equal to 12, 24, or 36 times the Single Life benefit amount. Annual cost-of-living adjustments (COLAs) are provided for eligible service and disability retirees and for surviving beneficiaries receiving payments under optional benefit plans, up to a lifetime maximum of 80% of the original benefit amount.

For a more detailed summary of benefits for the members of PSRS, refer to the *Summary Plan Description* in the *Actuarial Section* of this report.

Contributions – PSRS members were required to contribute 14.5% of their annual covered salary during fiscal year 2024. Employers were required to match the

contributions made by employees. The contribution rate is set each year by the Board of Trustees upon the recommendation of the independent actuary within the contribution restrictions set in Section 169.030 RSMo. The annual statutory increase in the total contribution rate may not exceed 1% of pay. Administrative costs are financed through investment earnings. Contributions for employees of the State of Missouri were made by the state in accordance with the actuarially determined contribution rate needed to fund current costs and prior service costs of state employees as authorized in Section 104.342.8 RSMo.

Members – The number of PSRS members and benefit recipients served by the System at June 30, 2024:

Retirees and beneficiaries receiving benefits			71,216
Inactive members entitled to, but not yet receiving benefits			11,230
Active members:	Vested	59,875	
	Non-vested	18,126	
Total active members			78,001
Other inactive members and terminated accounts			10,178
Total			170,625

Employers – PSRS had 534 contributing employers during fiscal year 2024.

The Public Education Employee Retirement System of Missouri (PEERS)

PEERS is a mandatory cost-sharing multiple employer retirement system for all public school district employees (except the school districts of St. Louis and Kansas City), employees of the Missouri Association of School Administrators, and public community college employees (except the Community College of St. Louis). Employees of covered districts who work 20 or more hours per week on a regular basis and who are not contributing members of the Public School Retirement System of Missouri (PSRS) must contribute to PEERS. Employees of PSRS who do not hold Missouri educator certificates also contribute to PEERS.

PEERS was established as a trust fund by the Missouri General Assembly effective October 13, 1965. Statutes governing the System are found in Sections 169.600 - 169.715 and Sections 169.560-169.595 RSMo. The statutes place responsibility for the operation of PEERS on the Board of Trustees of the Public School Retirement System of Missouri.

PEERS is a defined benefit plan providing service retirement and disability benefits to its members. Members are vested for service retirement benefits after accruing five years of service. Individuals who (a) are at least age 60 and have a minimum of five years of service, (b) have 30 years of service, or (c) qualify for benefits under the "Rule of 80" (service and age total at least 80) are entitled to a monthly benefit for life, which is calculated using a 1.61% benefit factor. Members qualifying for "Rule of 80" or "30-and-out" are entitled to an additional temporary 0.8% benefit multiplier until reaching minimum Social Security age (currently age 62). Actuarially age-reduced retirement benefits are available with five years of service at age 55. Members who are younger than age 55 and who do not qualify under the "Rule of 80" but have between 25 and 29.9 years of service may retire with a lesser benefit factor. Members who are three years beyond normal retirement can elect to have their lifetime monthly benefits actuarially reduced in exchange for the right to also receive a one-time partial lump sum (PLSO) payment at retirement equal to 12, 24, or 36 times the Single Life benefit amount. Annual cost-of-living adjustments (COLAs) up to a lifetime maximum of 80% of the original benefit amount are provided for eligible service and disability retirees and for surviving beneficiaries receiving payments under optional benefit plans.

For a more detailed summary of benefits for the members of PEERS, refer to the *Summary Plan Description* in the *Actuarial Section* of this report.

Contributions – PEERS members were required to contribute 6.86% of their annual covered salary during fiscal year 2024. Employers were required to match the contributions made by their employees. The contribution rate is set each year by the Board of Trustees upon the recommendation of the independent actuary within the contribution restrictions in Section 169.620 RSMo. The annual statutory increase in the total contribution rate may not exceed 0.5% of pay. Administrative costs proportional to its membership size are reimbursed by PEERS to PSRS and are financed through investment earnings.

Members – The number of PEERS members and benefit recipients served by the System at June 30, 2024:

Retirees and beneficiaries receiving benefits			38,985
Inactive members entitled to, but not yet receiving benefits			8,465
Active members:	Vested	26,100	
	Non-vested	27,472	
Total active members			53,572
Other inactive members and terminated accounts			43,969
Total			144,991

Employers – PEERS had 531 contributing employers during fiscal year 2024.

Note 2 – Summary of Significant Accounting Policies

Basis of Accounting

For financial reporting purposes, the Systems adhere to accounting principles generally accepted in the United States of America. The Systems apply all applicable pronouncements of the Governmental Accounting Standards Board (GASB).

The Systems' financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans*, as amended. GASB Statement No. 67 addresses accounting and financial reporting requirements for pension plans. Significant requirements include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosures regarding the pension liability, the sensitivity of the net pension liability to the discount rate and extensive investment activity disclosures. The total pension liability, determined in accordance with GASB Statement No. 67 is presented in Note 6 - *Net Pension Liability of Employers*.

The financial statements of both Systems were prepared using the accrual basis of accounting. For both Systems, member and employer contributions are recognized when due, pursuant to formal commitments and statutory requirements. Benefits and refunds are recognized when due and payable in accordance with the statutes governing the Systems. Expenses are recognized when the liability is incurred, regardless of when payment is made. Administrative expenses are funded through investment earnings.

Cash and Short-term Investments

Cash and short-term investments include deposits held for operational purposes at a commercial depository bank and cash and short-term investments with the master custodian.

Receivables

Receivables consist primarily of contributions owed and yet to be remitted by employers, pending investment trades and interest and dividends payable to the Systems as of the end of each fiscal year.

Method Used to Value Investments

Investments are reported at fair value. The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available. Many factors are considered in arriving at fair value. Fixed income securities not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk.

The value of private equity, private credit and private real estate investments, that do not have an established market, is determined based upon the most current net asset values and activities through fiscal year end. When values are not readily available, alternative investments are valued based on a good faith determination by the General Partner. The estimated fair value of these investments may differ significantly from values that would have been updated had a ready market existed. The estimated fair values can be significantly affected by uncertainty and volatility in financial markets. Consequently, fair value estimates in such instances may be subject to wide variations.

GASB Statement No. 72, *Fair Value Measurement and Application,* addresses accounting and reporting issues related to fair value measurements. The Statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Comprehensive footnote disclosure regarding this Statement is presented in Note 4 - *Deposits, Investments and Securities Lending Program.*

Capital Assets

Capital assets include tangible capital assets and intangible right-to-use assets. Capital assets are owned by PSRS. PSRS allocates depreciation and amortization expense to PEERS for the use of capital assets. PSRS has adopted capitalization thresholds to identify whether assets are classified as capital assets or operating expenses. Intangible assets are reported with capital assets on the Statements of Fiduciary Net Position. Capital assets are depreciated and amortized on a straight-line basis over their estimated useful lives. Additional information is presented in Note 5 - *Capital Assets*.

Adoption of New Accounting Pronouncements

The Systems review the requirements of all new GASB pronouncements and their impact on the financial statements. For the fiscal year ended June 30, 2024, there was no material impact to the Systems' financial statements resulting from the implementation of new accounting pronouncements.

Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of net position restricted for pension benefits at June 30, 2024. Actual results could differ from those estimates.

Total Columns

The financial statements include total column information for the prior year. Such information does not include sufficient detail to constitute a presentation in conformity with U.S. generally accepted accounting principles. Accordingly, such information should be read in conjunction with both Systems' financial statements for the year ended June 30, 2023, from which the information was derived.

Note 3 – Designations of Net Position – Restricted for Pensions

The Systems designate the net position – restricted for pensions for the following specific purposes:

Public School Retirement System of Missouri

		2024
Designated for Members' Contributions (Member Reserves) – Accumulation of active and terminated member contributions plus interest.	$	7,567,730,973
Designated for the Payment of Benefits to Present Retirees – Transfers from Member Reserves at retirement and an actuarially determined transfer from Operating Reserves to fund the System's obligation for benefit payments and cost-of-living adjustments to current retirees and beneficiary recipients.		36,785,307,236
Designated for Operating Expenses/Benefits to Future Retirees (Operating Reserves) – Accumulation of employer contributions and investment income used to fund future benefit payments, interest on member accounts and administration and maintenance expenses of the System.		7,695,320,286
Net Position – Restricted For Pensions	$	52,048,358,495

Public Education Employee Retirement System of Missouri

		2024
Designated for Members' Contributions (Member Reserves) – Accumulation of active and terminated member contributions plus interest.	$	939,197,352
Designated for the Payment of Benefits to Present Retirees – Transfers from Member Reserves at retirement and an actuarially determined transfer from Operating Reserves to fund the System's obligation for benefit payments and cost-of-living adjustments to current retirees and beneficiary recipients.		4,201,229,568
Designated for Operating Expenses/Benefits to Future Retirees (Operating Reserves) – Accumulation of employer contributions and investment income used to fund future benefit payments, interest on member accounts and administration and maintenance expenses of the System.		1,807,720,459
Net Position – Restricted For Pensions	$	6,948,147,379

Note 4 – Deposits, Investments and Securities Lending Program

Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Systems will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the Systems would not be able to recover the value of investment or collateral securities that are in the possession of an outside party. To mitigate custodial credit risk, the Systems require that all cash deposits that exceed the Federal Deposit Insurance Corporation (FDIC) insurance amounts, be 100% collateralized with securities held in the Systems' name and held by a third-party agent.

Deposits

At June 30, 2024, the PSRS carrying amount of deposits at the depository bank was $35,708,035 and the bank balance was $15,054,110. Of the bank balance, $500,000 was covered by federal depository insurance. In addition, the deposits were collateralized with U.S. agency securities held by a third-party institution in the System's name, totaling $21,195,971.

At June 30, 2024, the PEERS carrying amount of deposits at the depository bank was $5,270,766 and the bank balance was $2,406,505. Of the bank balance, $250,000 was covered by federal depository insurance. In addition, the deposits were collateralized with U.S. agency securities held by a third-party institution in the System's name, totaling $4,807,878.

Investment Policy and Asset Allocation

Funds for both Systems that are in excess of needed operating balances are invested under policies and procedures established by the Board of Trustees. Chapter 169.040 RSMo. authorizes any investment which a prudent person acting in a like capacity and familiar with similar matters would use in the conduct of an enterprise of a like character and with like aims. Any person with fiduciary responsibility with respect to the Systems is covered by this "prudent person" rule.

The Board of Trustees of PSRS and PEERS approved the commingling of assets for purposes of investment as allowed by state statute. In order to implement this change, PSRS and PEERS adopted the Missouri Education Pension Trust Agreement. The Missouri Education Pension Trust (MEPT) is managed by the PSRS and PEERS Board of Trustees and Investment Staff. Effective July 1, 2013, the invested assets of the Systems were pooled and invested in MEPT. All assets held by MEPT are for the exclusive benefit of PSRS and PEERS. Each of the Systems has equity in MEPT based on funds contributed and earnings allocated. Earnings of MEPT are allocated based on the average daily balances of each of the respective Systems. Individual investments in MEPT are not specifically identified to the respective Systems. For financial statement presentation, MEPT assets, liabilities, revenues, and expenses have been allocated to and presented in each respective system in the basic financial statements as required by investment pools. Due to the fact all invested assets are invested in MEPT, the rate of return for each of the Systems is approximately the same.

The Systems' policy in regard to the allocation of invested assets is established and may be amended by the Board of Trustees. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided by the Systems. The Board of Trustees approved the use of total plan leverage in fiscal year 2020. Leverage may be utilized (through futures, swaps, or other derivative instruments) to efficiently implement portfolio rebalancing and/or to apply modest leverage to total plan assets. The total direct leverage at the fund level shall not exceed 10% of the portfolio.

Based on the results of the fiscal year 2022 Asset Allocation/Liability Study, the Board of Trustees amended the following long-term asset allocation targets: Safe Assets decreased 5% and Private Risk Assets increased 5%. Within Private Risk Assets, Private Equity increased from 16% to 21%, while within Safe Assets, U.S. Treasuries decreased from 20% to 15%.

Implementation of the amended long-term targets will be achieved over time through a disciplined investment approach. The policy benchmarks will change over time as the Systems make meaningful progress towards the long-term targets. The following table illustrates the Systems' Board of Trustees approved asset allocation as of June 30, 2024.

Investment Type	Long-term Target	Policy Ranges
Public Risk Asset Programs		
U.S. Public Equity	23.0%	15% - 45%
Public Credit	0.0%	0% - 10%
Hedged Assets	6.0%	0% - 25%
Non-U.S. Public Equity	16.0%	8% - 28%
Total Public Risk Assets	**45.0%**	**35% - 70%**
Safe Assets		
U.S. Treasuries	15.0%	0% - 40%
U.S. TIPS	0.0%	0% - 30%
Cash & Cash Equivalents	0.0%	0% - 10%
Total Safe Assets	**15.0%**	**10% - 40%**
Private Risk Asset Programs		
Private Equity	21.0%	4% - 28%
Private Real Estate	11.0%	4% - 15%
Private Credit	8.0%	0% - 12%
Total Private Risk Assets	**40.0%**	**10% - 50%**
Total Fund	**100.0%**	

The Systems categorize their fair value measurements within the fair value hierarchy established by U.S. generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The Systems have classified the fair value measurements on the following page in accordance with the Board approved asset allocation discussed above. The classifications will not directly reconcile to total investments per the Statements of Fiduciary Net Position due to the considerations of cash holdings, other liabilities and accruals.

Level 1 - Unadjusted quoted prices for identical instruments in active markets.

Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 - Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Systems' assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The tables on the following page show the fair value leveling of the investments for the Systems.

Short-term securities generally include investments in money market-type securities and cash equivalents reported at cost which approximates fair value.

Equities within all assets classes that are classified in Level 1 are valued using prices quoted in active markets for those securities. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities. Equity securities classified in Level 3 are valued with last trade data having limited trading volume.

Fixed income securities and derivatives within all assets classes that are classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Such securities include U.S. Treasuries, corporate and agency bonds, bank loans, and mortgage backed securities. Level 2 fixed income securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market.

Investments and Derivatives Measured at Fair Value

Investments by fair value level	Total at June 30, 2024	Fair Value Measurements Level 1	Level 2	Level 3
U.S. Treasuries and TIPS				
U.S. Treasuries	$ 8,066,581,297	$ —	$ 8,066,581,297	$ —
Total U.S. Treasuries and TIPS	8,066,581,297	—	8,066,581,297	—
U.S. public equities				
Equities	7,097,248,304	7,097,248,304	—	—
Total U.S. public equities	7,097,248,304	7,097,248,304	—	—
Non-U.S. public equities				
Equities	6,310,545,504	6,310,933,428	—	(387,924)
Total Non-U.S. public equities	6,310,545,504	6,310,933,428	—	(387,924)
Short term investments				
Short term investment	1,965,881,208	1,965,881,208	—	—
Total Short term investments	1,965,881,208	1,965,881,208	—	—
Hedged Assets				
U.S. Treasuries	692,498	—	692,498	—
Equities	54,701,932	54,701,932	—	—
Total Hedged Assets	55,394,430	54,701,932	692,498	—
Private Equity				
Equities	8,602,895	8,602,895	—	—
Total Private Equity	8,602,895	8,602,895	—	—
Total Investments by fair value level	**$ 23,504,253,638**	**$ 15,437,367,767**	**$ 8,067,273,795**	**$ (387,924)**
Total Investments measured at the NAV ***(See detailed schedule on the following page)***	**35,163,787,822**			
Total Investments measured at fair value	**$ 58,668,041,460**			

Investment derivative instruments:	June 30, 2024	Level 1	Level 2	Level 3
Equity total return swaps	$ 50,474,253	$ —	$ 50,474,253	$ —
Foreign currency forwards	(3,835,067)	—	(3,835,067)	—
Total investment derivative instruments	**$ 46,639,186**	**$ —**	**$ 46,639,186**	**$ —**

Investments Measured at the NAV	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Public Equity Investments				
Passive U.S. Equity Funds	$ 6,101,710,612	$ —	Daily	1 day
Active U.S. Equity Funds	502,718,235	—	Quarterly	45 days
Passive Non-U.S. Equity Funds	1,192,376,560	—	Daily	2 days
Active Non-U.S. Equity Funds	2,744,639,079	—	Monthly	15 - 60 days
Total Public Equity Investments	10,541,444,486	—		
Hedged Assets Investments				
Asset Allocation/Global Macro	740,020,451	—	Monthly	5 days
Distressed Debt/Credit	944,612,161	—	Quarterly, semi-annual	65 - 90 days
Diversified Beta	357,556,097	—	Monthly, quarterly	4 - 30 days
Equity Focused	1,091,835,954	—	Monthly, quarterly	35 - 60 days
Multi-Strategy	2,521,881,006	—	Monthly, quarterly	30 - 90 days
Total Hedged Assets Investments	5,655,905,669	—		
Private Risk Investments				
Private Equity	10,203,913,476	4,086,272,876	Not eligible	N/A
Private Credit	3,150,783,465	2,250,354,411	Not eligible	N/A
Private Real Estate - closed end funds	2,347,000,371	2,198,251,070	Not eligible	N/A
Private Real Estate - open end funds	3,264,740,355	204,362,777	Quarterly	15 - 180 days
Total Private Risk Investments	18,966,437,667	8,739,241,134		
Total Investments measured at the NAV	$ 35,163,787,822	$ 8,739,241,134		

The fair values of investments in certain public equity, hedged assets, and private risk assets are based on the investments' net asset value (NAV) per share (or its equivalent) and are presented in the above table. Investments that are measured at fair value using the net asset value (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

Public Equity Investments

The public equity investments include two passive U.S. equity funds, one active U.S. equity fund, three passive non-U.S. equity funds and four active non-U.S. equity funds. The passive equity funds provide for basic market exposure with daily liquidity. The active U.S. equity fund provides an active industry specific strategy within U.S. markets while the active non-U.S. equity funds provide active investment strategies in the global equity, international equity, and emerging markets.

Hedged Assets Investments

The hedged assets investment strategy provides diversification and reduced volatility to the total portfolio. The purpose of this program is to enhance the overall risk/return profile through the inclusion of specialized investment strategies that typically generate returns in a different fashion (i.e., absent a high correlation to equities or bonds).

Asset Allocation/Global Macro includes an investment in a fund with the strategy of taking long and short positions based on top-down macroeconomic analysis (i.e., interest rates, foreign exchange rates, and commodity prices). Global strategies involve long and short positions in securities of diverse geographical regions such as developed and emerging markets.

Distressed Debt/Credit includes investments in three funds which seek returns by capitalizing on opportunities in financially distressed companies' debt and credit securities.

Diversified Beta includes investments in three funds with a risk parity approach which focuses on the allocation of risk across the portfolio.

Equity Focused includes investments in seven funds with the strategy of taking long positions in attractive equity securities and potentially short positions in unattractive equity securities.

Multi-Strategy includes investments in seven funds which represent a broad style of investing that seeks diverse sources of alpha generation and positive absolute returns by employing a variety of investment strategies. Strategies utilized may include, but are not limited to, convertible bond arbitrage, equity long/short, statistical arbitrage, and merger arbitrage.

Private Risk Investments

Private risk investments are typically very long-term in nature, not publicly traded and relatively illiquid. Investments are made in limited partnerships where redemptions are restricted over the life of the partnership. During the life of the partnerships, distributions are received as underlying portfolio investments are realized.

Private Equity investments provide financing for start-up companies, private middle market companies, firms in financial distress and public and non-public firms seeking buyout financing. Private equity investments can be classified into three basic sub-asset class categories: Venture Capital, Buyouts, and Debt-Related.

Private Credit investments are comprised primarily of debt-related investments that provide a current yield along with equity participation (usually warrants). Primary strategies are distressed debt, bankruptcy restructurings, mezzanine debt, bank loans, and other credit-driven or debt-related strategies.

Real Estate investments are intended to provide exposure to a diversified portfolio of institutional quality private real estate investments that will provide meaningful, consistent returns, and act as a hedge against inflation and a diversifier to the overall investment portfolio.

The real estate portfolio includes closed-end funds where distributions from each investment will be received as the underlying investments are liquidated and open-end funds which offer redemption options.

Rate of Return

For the year ended June 30, 2024, the money-weighted rate of return, net of all investment expenses and fees, was 10.6%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. Time-weighted returns (geometric return) for the year ended June 30, 2024 net of all investment expenses and fees, was 10.6%.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the Systems' investment in a single issue. To mitigate this risk, the Systems' investment policy prohibits investing more than 5% of the total investment portfolio into any single financial institution or issuer, excluding U.S. government securities. At June 30, 2024, the Systems did not have more than 5% of total investments in a single issue except for U.S. government securities.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Systems' investment policy restricts duration as a means of managing its exposure to fair value losses arising from increased interest rates. In addition, each manager must follow guidelines established relative to the duration of its benchmark. The portfolios are continually monitored to ensure compliance with these guidelines. The maturities of all debt securities are presented below:

Security Type	Fair Value as of June 30, 2024	<1 year to maturity	1 to 5 years to maturity	6 to 10 years to maturity	Over 10 years to maturity
U.S. Treasuries	$ 8,067,273,796	$ 391,949,487	$ 4,099,098,376	$ 1,514,846,591	$ 2,061,379,342
Bank Deposits	1,965,881,208	1,965,881,208	—	—	—
Commingled Funds (see note)					
Blackrock Fed Fund	2,521	2,521	—	—	—
Bridgewater STIF II	14,075,454	14,075,454	—	—	—
Bridgewater US IL Bond Fund	3,765,363	—	—	3,765,363	—
Bridgewater International Bond Fund	3,755,979	—	—	—	3,755,979
Currency	28,258,778	28,258,778	—	—	—
Total	$ 10,083,013,099	$ 2,400,167,448	$ 4,099,098,376	$ 1,518,611,954	$ 2,065,135,321
Percentage of Total Fixed Income	**100%**	**24%**	**41%**	**15%**	**20%**

Note: Commingled Funds are presented at the weighted average maturity. These funds do not have a single maturity date; however, the underlying securities have maturity dates. To more accurately reflect the interest rate risk of the Systems, these weighted averages are displayed.

The following table includes the debt maturities for the Systems' operating deposits and repurchase agreements collateral.

Security Type	Fair Value as of June 30, 2024	<1 year to maturity	1 to 5 years to maturity	6 to 10 years to maturity	Over 10 years to maturity
PSRS - Agencies	$ 21,195,971	$ 21,195,971	$ —	$ —	$ —
PEERS - Agencies	$ 4,807,878	$ —	$ 4,807,878	$ —	$ —

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Systems do not have a single investment policy designating the minimum allowable credit rating; however, each manager must follow guidelines established specifically for its managed portfolio. The portfolios are continually monitored to ensure compliance with these guidelines. The Systems' debt investments by credit rating category as of June 30, 2024 are presented in the following table.

Security Type	Fair Value as of June 30, 2024	%	FDIC Insured	AAA	AA	Not Rated
U.S. Treasuries	$ 8,067,273,796	80%	$ —	$8,067,273,796	$ —	$ —
Bank Deposits	1,965,881,208	20%	1,965,881,208	—	—	—
Commingled Funds (see note)						
Blackrock Fed Fund	2,521	0%	—	—	2,521	—
Bridgewater STIF II	14,075,454	0%	—	—	14,075,454	—
Bridgewater US IL Bond Fund	3,765,363	0%	—	—	3,765,363	—
Bridgewater International Bond Fund	3,755,979	0%	—	—	3,755,979	—
Currency	28,258,778	0%	—	—	—	28,258,778
Total	$10,083,013,099	100%	$1,965,881,208	$8,067,273,796	$ 21,599,317	$ 28,258,778
Percentage of Total Fixed Income	**100%**		**20%**	**80%**	**0%**	**0%**

Note: Commingled Funds are presented at the weighted average credit quality. These funds do not carry a rating in and of themselves; however, the underlying securities are all rated. To more accurately reflect the credit risk of the Systems, these weighted averages are displayed. Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not required to be disclosed; however, we feel it shows a more true picture of our fixed income holdings.

All collateral pledged in support of the Systems' operating deposits and repurchase agreements was held in agency securities with a quality rating of AAA.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Systems do not have a single investment policy designating the allowable exposure to foreign currency; however, each manager must follow guidelines established specifically for its managed portfolio. The portfolios are continually monitored to ensure compliance with these guidelines. The Systems' exposure to foreign currency risk as of June 30, 2024 is presented in the following table.

Currency	Equity	Currency/ Short Term	Total
Australian Dollar	$ 95,200,877	$ 1,070,469	$ 96,271,346
Brazilian Real	49,082,302	636,346	49,718,648
Canadian Dollar	193,736,853	(110,591)	193,626,262
Chilean Peso	3,908,217	21,518	3,929,735
Colombian Peso	3,266,788	48,630	3,315,418
Czech Koruna	684,050	13,307	697,357
Danish Krone	176,068,704	55,728	176,124,432
Egyptian Pound	6,797,609	72,330	6,869,939
Euro Currency	2,218,706,870	30,257,489	2,248,964,359
Hong Kong Dollar	317,703,107	794,638	318,497,745
Hungarian Forint	6,419,692	66,745	6,486,437
Indian Rupee	233,586,254	832,252	234,418,506
Indonesian Rupiah	32,802,966	259,364	33,062,330
Israeli Shekel	9,691,090	(26,505)	9,664,585
Japanese Yen	649,566,005	688,735	650,254,740
Malaysian Ringgit	20,243,952	170,012	20,413,964
Mexican Peso	6,739,917	254,240	6,994,157
New Taiwan Dollar	267,252,374	122,118	267,374,492
New Turkish Lira	31,923,600	7,346	31,930,946
New Zealand Dollar	2,450,852	(14,099)	2,436,753
Norwegian Krone	20,118,082	(1,287,427)	18,830,655
Pakistan Rupee	3,261,976	60,802	3,322,778
Peruvian Nuevo Sol	166,340	6,929	173,269
Philippine Peso	8,744,290	126,028	8,870,318
Polish Zloty	13,132,213	11,376	13,143,589
Pound Sterling	625,171,111	195,266	625,366,377
Qatari Rial	15,482,834	57,628	15,540,462
Russian Ruble	—	516,541	516,541
Singapore Dollar	83,354,860	486,088	83,840,948
South African Rand	12,854,009	(110,209)	12,743,800
South Korean Won	179,778,986	1,330,387	181,109,373
Swedish Krona	39,423,041	(44,334)	39,378,707
Swiss Franc	492,368,483	348,476	492,716,959
Thailand Baht	31,544,747	—	31,544,747
UAE Dirham	20,805,451	8,138	20,813,589
Yuan Renminbi	120,429,567	3,050,439	123,480,006
Total	**$ 5,992,468,069**	**$ 39,976,200**	**$ 6,032,444,269**

Derivatives

Derivatives are generally defined as investment instruments whose cash flows or fair values are derived from the value of some other asset or index. The Systems are parties to derivatives which have off-balance sheet risk. These derivative instruments are used in the normal course of business to generate earnings and reduce exposure to fluctuations in market conditions. The Systems are exposed to various types of credit, market, and legal risk related to these investments. Investment staff monitors these types of investments with extreme care and is not aware of any undue risks at this time. All derivatives are considered investments. Derivatives are reported at fair value on the Statements of Fiduciary Net Position based on quoted market prices when available. In the instances that quoted market prices are unavailable, pricing is obtained via independent pricing sources.

The fair value balances and notional amounts of derivative instruments outstanding as of June 30, 2024, classified by type are as follows:

	Fair Value at June 30, 2024		
Investment Derivatives	**Classification**	**Amount**	**Notional**
Swaps			
Total return swaps - equity	Investments, at fair value	$ 50,474,253	$ 1,801,538,106
Total swaps		**50,474,253**	**1,801,538,106**
Futures			
Equity futures long	Investments, at fair value	—	230,114,182
Equity futures short	Investments, at fair value	—	197,249,116
Interest rate futures short	Investments, at fair value	—	420,662,172
Interest rate futures long	Investments, at fair value	—	971,802,750
Commodity futures long	Investments, at fair value	—	6,316,920
Total futures		**—**	**1,826,145,140**
Foreign currency forwards net receivable/payable	Investment sales and purchases	(3,835,067)	—
Total Investment Derivatives		**$ 46,639,186**	**$ 3,627,683,246**

Swaps - The Systems' investment managers may enter into various swaps including interest rate swaps, credit default swaps, currency swaps and equity and total return swaps. Swaps represent an agreement between two parties to exchange sequences of cash flows over a period in the future. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty who, in turn, agrees to make return interest payments that float with some reference rate. A credit default swap is a contract whereby the credit risk associated with an investment is transferred by entering into an agreement with another party, who in exchange for periodic fees, agrees to make payments in the event of a default or other predetermined credit event. A currency swap is a foreign exchange transaction that involves trading principal and interest in one currency for the same in another currency. A total return swap is a contract in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of the underlying asset. The underlying asset is typically an index, bond, etc. Gains and losses on swaps are determined based on fair values and are recorded in net appreciation (depreciation) in fair value of investments on the Systems' Statements of Changes in Fiduciary Net Position. Net gains on swaps of $325.3 million were recognized for the fiscal year ended June 30, 2024.

Futures - Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specified price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the Systems' credit risk. The net change in the value of futures contracts is settled daily in cash with the exchanges. Net gains or losses resulting from the daily settlements are included in net appreciation (depreciation) in fair value of investments on the Systems' Statements of Changes in Fiduciary Net Position. The Systems recognized net gains on futures contracts of $27.1 million during the fiscal year ended June 30, 2024.

Options - Options represent or give buyers the right, but not the obligation, to buy (call) or sell (put) an asset at a preset price over a specified period. The option's price is usually a small percentage of the underlying asset's value. As a writer of financial options, the Systems' investment managers receive a premium at the outset of the agreement and bear the risk of an unfavorable change in the price of the financial instrument underlying the option. As a purchaser of financial options, the Systems' investment managers pay a premium at the outset of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. Net gains or losses resulting from such obligations are included in net appreciation (depreciation) in fair value of investments on the Systems' Statements of Changes in Fiduciary Net Position. The Systems had no option activity during the fiscal year ended June 30, 2024.

Currency forwards - Currency forwards represent forward foreign exchange contracts that are entered into in order to hedge the exposure to changes in foreign currency rates on the foreign currency dominated portfolio holdings. A forward foreign exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in net appreciation (depreciation) in fair value of investments on the Systems' Statements of Changes in Fiduciary Net Position. The Systems recognized net losses on such contracts of $11.4 million during the fiscal year ended June 30, 2024.

Derivative Risk - Derivatives that are exchange traded are not subject to credit risk. No derivatives held are subject to custodial credit risk.

The Systems are exposed to interest rate risk on their interest rate swaps. As the variable portion of the swaps move in the market, the Systems' exposure increases and decreases. The Systems are exposed to termination risk. The Systems' investment managers or their counterparties may terminate a derivative if either party fails to perform under the terms of the contract.

The Systems' derivatives are governed by ISDA Master Agreements between the Systems and the Counterparties. These agreements set forth collateral requirements and applicable netting arrangements. Foreign currency risks are reflected on page 40.

The Systems could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. The Systems' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. The Systems anticipate that the counterparties will be able to satisfy their obligations under the contracts.

The derivative financial instruments discussed involve, to varying degrees, elements of market risk to the extent of future market movements in excess of the amounts recognized in the Statements of Fiduciary Net Position. Market risk arises from the potential unfavorable change in the value of the underlying instruments. The contract or notional amounts of these instruments reflect the extent of the Systems' involvement in each class of financial instrument; however, these amounts do not represent the exposure to market loss. Additional derivatives may be held in limited partnerships and commingled funds that are not reflected below.

At June 30, 2024 the counterparties' credit ratings for currency forwards and swaps are subject to credit risk as shown below:

Derivative Counterparty Credit Ratings

Quality Rating	Swaps	Forwards	Total
A	$ 50,474,253	$ (3,835,067)	$ 46,639,186
Total subject to credit risk	**$ 50,474,253**	**$ (3,835,067)**	**$ 46,639,186**

Security Lending Activity

Under the "prudent person" authority of the governing statutes and in accordance with the policies set by the Board of Trustees, the Systems can lend securities to broker-dealers and banks pursuant to a form of loan agreement. The Systems' custodial bank is authorized to act as the Systems' agent to lend available securities to approved broker-dealers and banks subject to the receipt of acceptable collateral.

The Systems made a strategic decision to cease securities lending activity during fiscal year 2023. All material activity in the program was completed by June 30, 2023. No loans were made during fiscal year 2024 and the small balance of outstanding loans from June 30, 2023 were fully settled.

The Systems retain the ability to engage in securities lending activity in the future.

Note 5 – Capital Assets

Capital assets include tangible capital assets and intangible right-to-use assets. Capital assets are owned by PSRS. PSRS allocates depreciation and amortization expense to PEERS for the use of capital assets. PSRS has adopted capitalization thresholds used to identify whether assets are classified as capital assets or operating expenses.

Tangible capital assets are recorded at cost less depreciation accumulated since acquisition. The stated value does not purport to represent replacement or realized value. Costs of major additions and improvements are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation for tangible capital assets is calculated using the straight-line method, with estimated lives ranging from three to 40 years in the following major categories: computers and software, three years; vehicles, five years; equipment, five years; furniture and fixtures, seven years; building and land improvements, 15 years; pension administration system, 20 years; building, 40 years.

Intangible capital assets are recorded under GASB No. 87 *Leases,* and GASB No 96, *SBITAs*. The Systems have a building lease for office space in St. Louis that is recorded as an intangible capital asset. The Systems reviewed all possible SBITAs and determined no SBITAs existed that met the required capitalization threshold.

The intangible right-to-use assets and the related lease liabilities are recorded at the commencement date of the related contract. The lease liability, included on the Statements of Fiduciary Net Position, is measured at the present value of expected payments over the contract term. The intangible right-to-use assets are based on the initial measurement of the liability, plus any payments made to the vendor at or before the commencement of the contract term. Intangible right-to-use assets are amortized over the shorter of the term of the contract or the useful life of the underlying asset. Interest expense is recognized ratably over the contract term.

The table below is a schedule of the capital assets account balances of June 30, 2023 and 2024, with changes to those account balances during the year ended June 30, 2024. Depreciation and amortization expense are allocated to investment or administrative expenses depending on the primary use of the capital asset. The right-to-use asset is an Investment Department capital asset.

	Land	Building and Building Improvements	Furniture, Fixtures, & Equipment	Hardware, Software, & Pension Administration System	Vehicles	CIP - Office Space	Right-to-use Assets, inclusive of Leasehold Improvements	Total Capital Assets
Cost								
Balances June 30, 2023	$ 1,685,074	$ 22,303,111	$ 1,205,876	$ 21,369,952	$ 265,855	$ 108,986	$ 969,019	$ 47,907,873
Additions	—	—	85,325	42,351	108,601	—	83,937	320,214
Deletions	—	—	—	(19,834)	(98,106)	(108,986)	—	(226,926)
Balances June 30, 2024	$ 1,685,074	$ 22,303,111	$ 1,291,201	$ 21,392,469	$ 276,350	$ —	$ 1,052,956	$ 48,001,161
Accumulated Depreciation and Amortization								
Balances June 30, 2023	$ —	$ 5,015,999	$ 322,322	$ 9,415,549	$ 126,235	$ —	$ 20,451	$ 14,900,556
Depreciation and Amortization expense	—	551,743	197,919	1,289,638	48,845	—	159,054	2,247,199
Deletions	—	—	—	(19,834)	(67,026)	—	—	(86,860)
Balances June 30, 2024	$ —	$ 5,567,742	$ 520,241	$ 10,685,353	$ 108,054	$ —	$ 179,505	$ 17,060,895
Net Capital Assets, June 30, 2024	**$ 1,685,074**	**$ 16,735,369**	**$ 770,960**	**$ 10,707,116**	**$ 168,296**	**$ —**	**$ 873,451**	**$ 30,940,266**

The lease liability associated with the right-to-use assets results in the following future minimum lease commitments:

Year Ending June 30	Principal	Interest	Total
2025	$110,754	$30,656	$141,410
2026	$117,912	$26,324	$144,236
2027	$125,408	$21,714	$147,122
2028	$133,255	$16,813	$150,068
2029	$141,460	$11,608	$153,068
2030-2031	$228,016	$6,950	$234,966

Note 6 – Net Pension Liability of Employers

The components of the net pension liability of the Systems' employers at June 30, 2024 are as follows:

	Total Pension Liability (TPL) (a)	Plan Fiduciary Net Position-Restricted for Pensions (b)	Net Pension Liability (NPL) (a - b)	Plan Fiduciary Net Position as a % of TPL (b/a)	Covered Payroll (c)	Employers' NPL as a % of Covered Payroll ((a-b)/c)
PSRS	$ 58,971,485,493	$ 52,048,358,495	$ 6,923,126,998	88.3%	$ 5,518,376,776	125.5%
PEERS	$ 7,810,188,015	$ 6,948,147,379	$ 862,040,636	89.0%	$ 2,247,554,088	38.4%

Actuarial Assumptions – Actuarial valuations of the Systems involve estimates of the reported amount and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The Board of Trustees adopts actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience for the Systems, derived from experience studies conducted every fifth year. The most recent comprehensive experience studies were completed in May 2021. All economic and demographic assumptions were reviewed and updated, where appropriate, based on the results of the studies and were effective with the June 30, 2021 valuations. Due to the passage of Senate Bill 75, selected PSRS retirement rate assumptions were amended at the October 30, 2023 Board meeting effective with the June 30, 2023 PSRS valuation. There were no other assumption changes for PSRS and no assumption changes for PEERS. The next experience studies are scheduled to be completed prior to the June 30, 2026 valuations.

The Schedules of Employer's Net Pension Liability presents multi-year trend information about whether the plan net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the required supplementary information following the notes to the financial statements. The total pension liability was determined by an actuarial valuation as of June 30, 2024. A summary of the significant actuarial assumptions as of June 30, 2024 are shown on the following pages.

Sensitivity of Net Pension Liability

The sensitivity of the net pension liability of employers to changes in the discount rate is presented below. The net pension liability of employers calculated using the discount rate of 7.3% is presented as well as what the employers' net pension liability would be using a discount rate that is 1.0% lower (6.3%) or 1.0% higher (8.3%) than the current rate.

		1% Decrease (6.3%)	Current Rate (7.3%)	1% Increase (8.3%)
PSRS	Net Pension Liability	$ 14,365,678,623	$ 6,923,126,998	$ 760,740,888
PEERS	Net Pension Liability	$ 1,818,041,384	$ 862,040,636	$ 65,453,746

Measurement Date	June 30, 2024
Valuation Date	June 30, 2024
Actuarial Cost Method	Entry Age Normal
Investment Rate of Return	7.30%
Inflation	2.00%
Total Payroll Growth	
PSRS	2.25% per annum, consisting of 2.00% inflation, 0.125% additional inflation due to the inclusion of health care costs in pension earnings, and 0.125% of real wage growth.
PEERS	2.50% per annum, consisting of 2.00% inflation, 0.25% additional inflation due to the inclusion of health care costs in pension earnings, and 0.25% of real wage growth.
Individual Salary Growth	
PSRS	2.625% - 8.875%, depending on service and including 2.00% inflation, 0.125% additional inflation due to the inclusion of health care costs in pension earnings, 0.125% of real wage growth for productivity, and real wage growth for merit.
PEERS	3.25% - 9.75%, depending on service and including 2.00% inflation, 0.25% additional inflation due to the inclusion of health care costs in pension earnings, 0.25% of real wage growth for productivity, and real wage growth for merit.

Cost-of-Living Increases

Given that the actual increase in the CPI-U index from June 2023 to June 2024 was 2.97%, the Board approved an actual cost-of-living adjustment ("COLA") as of January 1, 2025 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, compared to an assumed COLA of 1.35%. Future COLAs assumed in the valuation are 1.35%. This COLA assumption is based on the 20-year stochastic analysis of inflation performed in the 2021 experience study, short-term expectation of COLA at the time of the experience study, and application of the Board's funding policy to those expectations. The assumption was re-evaluated for the June 30, 2022 and June 30, 2023 valuations in light of the current inflationary environment, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in recent years. Based on this information, no change was made to the COLA assumption for the June 30, 2022 and June 30, 2023 valuations. At June 30, 2024, the assumption was again revisited and given the current inflationary environment, and the current policy of the Board, no changes were made to the assumption for the current year. Additional information is included in the *Actuarial Section* of this report.

The COLA is compounded annually, beginning on the second January after retirement for PSRS and capped at an 80% lifetime increase.

The COLA is compounded annually, beginning on the fourth January after retirement for PEERS and capped at an 80% lifetime increase.

Retirement Rates

Detailed PSRS and PEERS retirement rate assumptions are included in the Actuary Section of this report.

Mortality Assumption

Actives:

PSRS: Experience-adjusted Pub-2010 Teachers Mortality Table for Employees projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

PEERS: Experience-adjusted Pub-2010 General (Below-Median Income) Mortality Table for Employees projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

Non-Disabled Retirees, Beneficiaries and Survivors:

PSRS: Mortality rates for non-disabled retirees and beneficiaries are based on the Pub-2010 Teachers Amount-Weighted Healthy Retiree Mortality Table and the Pub-2010 Amount-Weighted Contingent Survivors Mortality Tables, respectively. The tables are projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the experience-based adjustment factors shown in the tables below at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

	Males	Females
Non-Disabled	1.10	1.04
Contingent Survivor	1.18	1.07

Measurement Date	June 30, 2024		
Valuation Date	June 30, 2024		

Mortality Assumption - continued

PEERS

Mortality rates for non-disabled retirees and beneficiaries are based on the Pub-2010 General (Below-Median Income) Amount-Weighted Healthy Retiree Mortality Table and the Pub-2010 (Below-Median Income) Amount-Weighted Contingent Survivors Mortality Table, respectively. The tables are projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the experience-based adjustment factors shown in the tables below at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

	Males	Females
Non-Disabled	1.13	0.94
Contingent Survivor	1.01	1.07

Disabled Retirees

PSRS

Experience-adjusted Pub-2010 Teacher Amount-Weighted Disability Retiree Mortality Table, projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

PEERS

Experience-adjusted Pub-2010 General Employees Amount-Weighted Disability Retiree Mortality Table projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

Long-Term Expected Rate of Return

The long-term expected rate of return on investments was determined in accordance with Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations.* ASOP No. 27 provides guidance on the selection of an appropriate assumed rate of return. The long-term expected rate of return on the Systems' investments was determined using a building-block method in which best-estimate ranges of expected future real rates of returns (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return and the assumed asset allocation for each major asset class as of June 30, 2024 are summarized below.

Asset Class	Target Asset Allocation	Long-Term Expected Real Return Arithmetic Basis
U.S. Public Equity	23.0 %	4.81 %
Public Credit	0.0 %	0.80 %
Hedged Assets	6.0 %	2.39 %
Non-U.S. Public Equity	16.0 %	6.88 %
U.S. Treasuries	15.0 %	-0.02 %
U.S. TIPS	0.0 %	0.29 %
Private Credit	8.0 %	5.61 %
Private Equity	21.0 %	10.90 %
Private Real Estate	11.0 %	7.47 %

The long-term expected rate of return used to measure the total pension liability was 7.3% as of June 30, 2024 and is consistent with the long-term expected geometric return on plan investments. The projection of cash flows used to determine the discount rate assumed that employer contributions would be made at the actuarially calculated rate computed in accordance with assumptions and methods stated in the funding policy adopted by the Board of Trustees, which requires payment of the normal cost and amortization of the unfunded actuarially accrued liability in level percent of employee payroll installments over 30 years utilizing a closed period, layered approach. Based on this assumption, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

Note 7 – Retirement Plans

Section 401(a) Defined Benefit Plan

All full-time System employees holding valid Missouri educator certificates are covered by PSRS. All other eligible employees are members of PEERS. Both Systems provide retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. Chapter 169 RSMo contains the statutory provisions of both Systems.

PSRS members were required to contribute 14.5% of their annual covered salary during fiscal years 2024, 2023, and 2022. PSRS, as the employer, was required to match that amount. The contribution rate is set each year by the Board of Trustees upon the recommendation of the independent actuary within the contribution restrictions set in Section 169.030 RSMo. Employer contributions to PSRS totaled $132,543 for the 2024 fiscal year, $146,545 for the 2023 fiscal year and $129,254 for the 2022 fiscal year. The amounts for these years are equal to the required contributions.

PEERS members were required to contribute 6.86% of their annual covered salary during fiscal years 2024, 2023, and 2022. PSRS, as the employer, was required to match that amount. The contribution rate is set each year by the Board of Trustees upon the recommendation of the independent actuary within the contribution restrictions in Section 169.620 RSMo. Employer contributions to PEERS totaled $1,216,716 for the 2024 fiscal year, $1,058,176 for the 2023 fiscal year, and $900,225 for the 2022 fiscal year. The amounts for these years are equal to the required contributions.

PSRS and PEERS, as the administrators for the defined benefit pension plans, are also a participating employer of the Systems. The administrative expenses of the Systems are included in the deductions to the Systems' fiduciary net position. While the employer contributions of the other participating employers are funded from outside revenue sources, the employer contributions of PSRS and PEERS are funded from sources already recognized as revenues - earnings on plan investments. Attempting to allocate a portion of the net pension liability to PSRS would result in an allocation of the net pension liability to the other participating employers.

Accordingly, PSRS will exclude its contributions from the employer proportionate share calculation for the reporting of a net pension liability, by assigning itself a proportionate share of 0%.

Deferred Compensation Plans

A voluntary Section 457 deferred compensation plan is administered to provide additional retirement benefits for employees. The plan provides for employer-matching contributions up to a set maximum. The total contributions are subject to the limitations established in IRC Section 457. The Board of Trustees has authority to establish the employer contribution levels. For most employees, the System will match $75 plus 0.52% of salary per month. For certain employees, the System will make employer-paid contributions equal to annual limitations established in IRC Section 457, if eligible. This is governed by individual employment contracts.

In addition, the Systems previously established a 401(a) defined contribution plan for certain employees. The employees are approved for participation in the plan by the Systems' Board of Trustees. The plan is a tax qualified plan under Section 401(a) of the Internal Revenue Code and all contributions by or on behalf of employees are tax deferred until time of withdrawal. Effective January 1, 2024, most employer-matching and employer-paid contributions that were previously contributed to the 457 deferred compensation plan are also now made to the 401(a) deferred compensation plan.

All employees immediately vest in the employer-matching and employer-paid contributions. Employer-matching contributions totaled $194,485 and employer-paid contributions totaled $193,347 for the 2024 fiscal year. Employee contributions totaled $844,988 for the 2024 fiscal year. Employer-matching contributions totaled $153,323 and employer-paid contributions totaled $196,250 for the 2023 fiscal year. Employee contributions totaled $649,252 for the 2023 fiscal year.

Maintenance of individual member accounts and custody of assets have been contracted to a third-party administrator and investment custodian. Total contributions are sent directly to the third-party administrator by the employer. Employees can self-direct investments of their contributions and their respective share of matching contributions in a number of investment options. Because the System does not hold the plan's assets and does not have significant administrative responsibilities, the plan's assets and changes in net position are not reported in the Systems' financial statements.

The Systems established an unfunded Section 457(f) non-qualified deferred compensation plan for certain

employees. The plan is subject to Internal Revenue Code section 457(f), and to the extent applicable, Internal Revenue Code section 409A. Employees approved for participation in the plan by the Systems' Board of Trustees may acquire a vested interest in a deferred compensation award which is credited to the account of the member under terms approved by the Board of Trustees. The value of the member's account shall be subject to a risk of forfeiture based on the applicable vesting schedule determined for the member. As of June 30, 2024, employees had a vested interest under the plan of $861,996 and disbursements of $108,338 were made from the plan for the year then ended.

Note 8 – Other Post-Employment Benefit Plans

Post-Employment Staff Retiree Healthcare Plan

Plan Description, Funding Policy and Benefits Provided – The Public School Retirement System of Missouri Staff Retiree Healthcare Program (SRHP) is a single-employer defined benefit other post-employment benefit (OPEB) plan administered by PSRS. SRHP is administered as required by RSMo 169.590. SRHP provides a healthcare premium implicit rate subsidy to eligible staff retirees and their dependents provided they pay 100% of the blended healthcare premium. The blended healthcare premium is based on all active and retired employees. Retiree healthcare benefits are funded on a pay-as-you-go basis, with premiums determined annually. Therefore, no formal trust has been established for the SRHP. The PSRS/PEERS Board of Trustees determines the funding of benefits and any benefit amendments. There is no continuing obligation to provide benefits beyond each calendar year. SRHP does not issue a stand-alone public financial report.

Employees covered by benefit terms:

Retirees and spouses of retirees receiving benefits	16
Active employees	162
Total	178

OPEB Liability – The components of the net OPEB Liability of the SRHP as of June 30, 2024 are as follows:

Total OPEB Liability - Beginning of the year	$	3,256,097
Service costs		125,469
Interest costs		120,094
Experience (gains) losses		601,545
Assumption changes		328,423
Plan amendments		—
Benefit payments		(238,421)
Total OPEB Liability - End of year	$	4,193,207
OPEB Plan Fiduciary Net Position	$	—
Net OPEB Liability	$	4,193,207

OPEB Expense – The components of the OPEB expense for the year ended June 30, 2024 are as follows:

Service costs	$	125,469
Plan amendments		—
Interest costs		120,094
Recognition of deferred (inflows) outflows of resources related to:		
Liability experience (gains) losses		90,644
Assumption changes (gains) losses		(163,045)
Total recognition of deferred (inflows) outflows of resources		(72,401)
Total collective OPEB expense recognized	$	173,162

Actuarial Method and Assumptions – The total OPEB liability was determined by an actuarial valuation as of June 30, 2024. Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial assumptions and methods used in the valuation are based on prior plan experience and industry trends. The nature of the plan design and overall plan size does not allow for full scale periodic experience studies; therefore, such a study has not been conducted. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and healthcare cost trends. Amounts determined regarding the total OPEB liability and expense are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

In the June 30, 2024 actuarial valuation, the following actuarial assumptions and methods were used:

Post-Employment Health Plan

Measurement date	June 30, 2024
Valuation date	June 30, 2024
Actuarial cost method	Entry Age Normal
Actuarial value of assets	No Assets (pay-as-you-go)
Amortization method	Level Percent Open
Discount rate	3.91% per year effective June 30, 2024 3.68% per year effective June 30, 2023
Wage inflation	2.50% per year
Healthcare trend rate	8.00% for fiscal year 2024, decreasing by one-half percentage point per year down to 5.50% in 2029, decreasing by one-quarter percentage point per year down to 4.50% in 2033 and thereafter.
Mortality	
Active members	Based on Experience-adjusted Pub-2010 Mortality Tables with generational projections using the MP-2020 Improvement Scale.
Disabled and Non-disabled retirees and beneficiaries	Based on Experience-adjusted Pub-2010 Mortality Tables with generational projections using the MP-2020 Improvement Scale.

Discount Rate - GASB Statement No. 75 requires plans not administered through a trust to utilize the yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. The Systems utilized the U.S. General Obligation AA Municipal Bond Yield Curve for 20 years for the June 30, 2024 and 2023 valuations. The June 30, 2024 rate was 3.91% and the June 30, 2023 rate utilized was 3.68%. The movement in the yield on the 20 Year U.S. General Obligation AA Municipal Bond is considered an assumption change for reporting purposes.

Deferred Inflows and Outflows of Resources - As of June 30, 2024, the Systems reported deferred outflows of resources and deferred inflows of resources from the following sources related to the SRHP:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Balance of Deferred Outflows and Inflows Due to:		
Differences between expected and actual experience	$ 981,250	$ —
Changes of assumptions	—	1,154,913
Total	$ 981,250	$ 1,154,913

Amounts reported as collective deferred (inflows) /outflows of resources are to be recognized in pension expense as follows:

Year Ending June 30:		
	2025	$ 72,401
	2026	72,401
	2027	60,674
	2028	55,297
	2029	67,155
	Thereafter	(154,265)
		$ 173,663

Sensitivity of the net OPEB liability to changes in the discount rate and health care cost trend rate – The following table presents the sensitivity of the net OPEB liability to changes in the discount rate. The net OPEB liability calculated using the discount rate of 3.91% is presented as well as what the net OPEB liability would be using a discount rate that is 1.0% lower (2.91%) or 1.0% higher (4.91%) than the current rate.

Discount Rate Sensitivity			
	1% Decrease (2.91%)	Current Rate (3.91%)	1% Increase (4.91%)
Net OPEB Liability	$ 4,660,885	$ 4,193,207	$ 3,775,350

The following table presents the sensitivity of the net OPEB liability to changes in the healthcare trend rate. The net OPEB liability calculated using the healthcare trend rate of 8.0% is presented as well as what the net OPEB liability would be using a healthcare trend rate that is 1.0% lower (7.0%) or 1.0% higher (9.0%) than the current rate.

Trend Rate Sensitivity			
	1% Decrease (7.0%)	Current Rate (8.0%)	1% Increase (9.0%)
Net OPEB Liability	$ 3,696,403	$ 4,193,207	$ 4,778,795

PSRS maintains a Post-Employment Health Plan ("PEHP") for employees. Upon termination, an employee will receive payment at the rate of one day of pay for each two days of accrued sick leave up to 100 days of accrued sick leave (50 days paid). Any days above 100 will be forfeited. All payments under the PEHP in excess of $1,000 were transferred into a PEHP account which can be used to pay health insurance premiums for the employee or dependent at any time in the future. If an employee is retiring, the payments can be transferred back to PSRS on a monthly basis to cover the cost of health insurance for the retiree. The amount paid into the PEHP was $93,370 for five employees during 2024.

Note 9 – Risk Management

The Systems are exposed to various risks of loss related to natural disasters, errors and omissions, loss of assets, torts, etc. The Systems have chosen to cover such losses through the purchase of commercial insurance. There have been no material insurance claims filed or paid during the past three years.

The Systems have a disaster recovery plan that provides for continued computer operations at a remote location should the retirement office be unavailable for normal operations.

Note 10 – Commitments and Contingencies

Commitments to the future purchase of investments at June 30, 2024 totaled $2,142,772,390.

Total unfunded capital commitments to private real estate, private equity and other alternative investments totaled approximately $8.7 billion as of June 30, 2024. The unfunded commitments are not recorded in the Statements of Fiduciary Net Position.

Certain legal proceedings are pending with PSRS and PEERS arising from normal activities. Although unable to predict the outcome of these matters, the Systems believe the final outcome of these actions will not have a material adverse effect on the Systems' financial statements.

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Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri
Required Supplementary Information
Schedules of Changes in the Employers' Net Pension Liability

Public School Retirement System of Missouri

Year Ended:	June 30, 2024	June 30, 2023	June 30, 2022	June 30, 2021
Total pension liability				
Service cost	$ 899,291,188	$ 876,845,775	$ 859,683,772	$ 859,537,572
Interest cost	4,117,832,084	3,992,075,378	3,811,621,348	3,682,226,376
Difference between actual and expected experience	231,878,102	454,043,517	958,073,983	957,100,081
Assumption changes	—	—	—	590,572,160
Plan amendments	—	(242,283,947)	—	—
Benefit payments	(3,471,146,953)	(3,292,309,407)	(3,058,416,178)	(2,896,159,765)
Net change in total pension liability	1,777,854,421	1,788,371,316	2,570,962,925	3,193,276,424
Total pension liability - beginning of year	$ 57,193,631,072	$ 55,405,259,756	$ 52,834,296,831	$ 49,641,020,407
Total pension liability - end of year (a)	$ 58,971,485,493	$ 57,193,631,072	$ 55,405,259,756	$ 52,834,296,831
Plan Fiduciary Net Position				
Employer contributions	$ 819,926,016	$ 792,646,705	$ 764,348,407	$ 745,638,245
Member contributions	858,833,585	832,155,051	807,545,968	779,834,058
Net investment return	5,020,969,711	2,842,522,443	(1,451,263,667)	11,291,720,999
Benefit payments, including refunds of member contributions	(3,471,146,953)	(3,292,309,407)	(3,058,416,178)	(2,896,159,765)
Administrative and other expenses	(13,331,978)	(12,961,170)	(11,679,122)	(10,818,620)
Net change in plan fiduciary net position	3,215,250,381	1,162,053,622	(2,949,464,592)	9,910,214,917
Plan fiduciary net position - beginning of year	$ 48,833,108,114	$ 47,671,054,492	$ 50,620,519,084	$ 40,710,304,167
Plan fiduciary net position - end of year (b)	$ 52,048,358,495	$ 48,833,108,114	$ 47,671,054,492	$ 50,620,519,084
Net pension liability - end of year (a-b)	$ 6,923,126,998	$ 8,360,522,958	$ 7,734,205,264	$ 2,213,777,747

Public Education Employee Retirement System of Missouri

Year Ended:	June 30, 2024	June 30, 2023	June 30, 2022	June 30, 2021
Total pension liability				
Service cost	$ 207,757,197	$ 191,021,192	$ 181,174,916	$ 181,297,752
Interest cost	539,856,048	510,188,505	478,838,864	457,694,318
Difference between actual and expected experience	105,890,938	120,990,656	159,800,719	98,736,815
Assumption changes	—	—	—	84,245,144
Plan amendments	—	—	—	—
Benefit payments	(444,953,340)	(419,271,522)	(381,960,501)	(350,520,890)
Net change in total pension liability	408,550,843	402,928,831	437,853,998	471,453,139
Total pension liability - beginning of year	$ 7,401,637,172	$ 6,998,708,341	$ 6,560,854,343	$ 6,089,401,204
Total pension liability - end of year (a)	$ 7,810,188,015	$ 7,401,637,172	$ 6,998,708,341	$ 6,560,854,343
Plan Fiduciary Net Position				
Employer contributions	$ 162,777,627	$ 147,463,789	$ 135,180,782	$ 126,877,255
Member contributions	169,864,132	156,401,863	144,214,603	134,324,324
Net investment return	667,097,137	373,201,647	(189,300,233)	1,431,016,967
Benefit payments, including refunds of member contributions	(444,953,340)	(419,271,522)	(381,960,501)	(350,520,890)
Administrative and other expenses	(9,371,337)	(8,653,148)	(7,706,071)	(7,379,579)
Net change in plan fiduciary net position	545,414,219	249,142,629	(299,571,420)	1,334,318,077
Plan fiduciary net position - beginning of year	$ 6,402,733,160	$ 6,153,590,531	$ 6,453,161,951	$ 5,118,843,874
Plan fiduciary net position - end of year (b)	$ 6,948,147,379	$ 6,402,733,160	$ 6,153,590,531	$ 6,453,161,951
Net pension liability - end of year (a-b)	$ 862,040,636	$ 998,904,012	$ 845,117,810	$ 107,692,392

June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
$ 845,283,640	$ 830,084,321	$ 792,276,388	$ 740,176,751	$ 842,548,463	$ 836,085,151
3,559,151,521	3,466,455,926	3,346,220,624	3,198,060,384	3,263,288,365	3,019,050,250
75,988,120	(314,439,382)	137,516,335	60,942,067	(641,098,601)	598,417,056
—	—	531,202,248	1,279,805,826	100,247,551	—
—	—	—	—	—	—
(2,813,232,110)	(2,710,273,502)	(2,606,985,013)	(2,521,832,399)	(2,430,906,732)	(2,326,196,773)
1,667,191,171	1,271,827,363	2,200,230,582	2,757,152,629	1,134,079,046	2,127,355,684
$ 47,973,829,236	$ 46,702,001,873	$ 44,501,771,291	$ 41,744,618,662	$ 40,610,539,616	$ 38,483,183,932
$ 49,641,020,407	$ 47,973,829,236	$ 46,702,001,873	$ 44,501,771,291	$ 41,744,618,662	$ 40,610,539,616
$ 724,995,473	$ 712,545,096	$ 696,970,398	$ 684,857,718	$ 670,794,045	$ 656,924,899
757,916,937	747,402,726	726,996,161	719,625,373	704,785,734	689,187,215
1,457,518,290	2,595,865,535	3,173,735,918	4,104,123,251	533,180,245	1,447,169,205
(2,813,232,110)	(2,710,273,502)	(2,606,985,013)	(2,521,832,399)	(2,430,906,732)	(2,326,196,773)
(10,653,288)	(11,326,398)	(11,418,119)	(10,497,712)	(11,562,965)	(10,013,601)
116,545,302	1,334,213,457	1,979,299,345	2,976,276,231	(533,709,673)	457,070,945
$ 40,593,758,865	$ 39,259,545,408	$ 37,280,246,063	$ 34,303,969,832	$ 34,837,679,505	$ 34,380,608,560
$ 40,710,304,167	$ 40,593,758,865	$ 39,259,545,408	$ 37,280,246,063	$ 34,303,969,832	$ 34,837,679,505
$ 8,930,716,240	$ 7,380,070,371	$ 7,442,456,465	$ 7,221,525,228	$ 7,440,648,830	$ 5,772,860,111

June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
$ 173,676,697	$ 170,543,513	$ 161,028,014	$ 150,975,958	$ 161,391,660	$ 156,599,641
436,863,559	417,341,777	397,675,858	374,497,203	372,184,628	333,780,285
(286,057)	(10,635,802)	117,686	3,076,923	(51,257,557)	45,518,402
—	—	61,921,295	140,420,925	65,420,724	—
—	—	—	—	—	—
(330,337,694)	(310,242,399)	(287,634,108)	(269,268,101)	(250,390,477)	(235,070,181)
279,916,505	267,007,089	333,108,745	399,702,908	297,348,978	300,828,147
$ 5,809,484,699	$ 5,542,477,610	$ 5,209,368,865	$ 4,809,665,957	$ 4,512,316,979	$ 4,211,488,832
$ 6,089,401,204	$ 5,809,484,699	$ 5,542,477,610	$ 5,209,368,865	$ 4,809,665,957	$ 4,512,316,979
$ 124,544,728	$ 120,042,046	$ 115,103,143	$ 111,239,585	$ 106,717,021	$ 103,624,310
131,335,977	126,609,105	121,467,850	118,446,790	114,257,497	110,443,660
181,855,037	319,773,260	381,523,965	485,046,867	60,317,387	163,719,526
(330,337,694)	(310,242,399)	(287,634,108)	(269,268,101)	(250,390,478)	(235,070,010)
(7,077,789)	(7,423,689)	(7,113,566)	(6,377,808)	(6,981,573)	(5,629,551)
100,320,259	248,758,323	323,347,284	439,087,333	23,919,854	137,087,935
$ 5,018,523,615	$ 4,769,765,292	$ 4,446,418,008	$ 4,007,330,675	$ 3,983,410,821	$ 3,846,322,886
$ 5,118,843,874	$ 5,018,523,615	$ 4,769,765,292	$ 4,446,418,008	$ 4,007,330,675	$ 3,983,410,821
$ 970,557,330	$ 790,961,084	$ 772,712,318	$ 762,950,857	$ 802,335,282	$ 528,906,158

Public School Retirement System of Missouri and Public Education Employee Retirement System of Missouri

Required Supplementary Information

Schedules of Employers' Net Pension Liability

Public School Retirement System of Missouri

Year Ended	Total Pension Liability (TPL) (a)	Plan Fiduciary Net Position - Restricted for Pensions (b)	Net Pension Liability (NPL) (a - b)	Plan Fiduciary Net Position as a % of TPL (b/a)	Covered Payroll (c)	Employers' NPL as a % of Covered Payroll ((a-b)/c)
6/30/15	$ 40,610,539,616	$ 34,837,679,505	$ 5,772,860,111	85.8%	$ 4,508,241,581	128.1%
6/30/16	41,744,618,662	34,303,969,832	7,440,648,830	82.2%	4,556,137,282	163.3%
6/30/17	44,501,771,291	37,280,246,063	7,221,525,228	83.8%	4,655,169,121	155.1%
6/30/18	46,702,001,873	39,259,545,408	7,442,456,465	84.1%	4,759,665,456	156.4%
6/30/19	47,973,829,236	40,593,758,865	7,380,070,371	84.6%	4,844,248,703	152.3%
6/30/20	49,641,020,407	40,710,304,167	8,930,716,240	82.0%	4,919,286,103	181.5%
6/30/21	52,834,296,831	50,620,519,084	2,213,777,747	95.8%	5,039,838,429	43.9%
6/30/22	55,405,259,756	47,671,054,492	7,734,205,264	86.0%	5,140,286,466	150.5%
6/30/23	57,193,631,072	48,833,108,114	8,360,522,958	85.4%	5,327,050,097	156.9%
6/30/24	58,971,485,493	52,048,358,495	6,923,126,998	88.3%	5,518,376,776	125.5%

Public Education Employee Retirement System of Missouri

Year Ended	Total Pension Liability (TPL) (a)	Plan Fiduciary Net Position - Restricted for Pensions (b)	Net Pension Liability (NPL) (a - b)	Plan Fiduciary Net Position as a % of TPL (b/a)	Covered Payroll (c)	Employers' NPL as a % of Covered Payroll ((a-b)/c)
6/30/15	$ 4,512,316,979	$ 3,983,410,821	$ 528,906,158	88.3%	$ 1,469,771,528	36.0%
6/30/16	4,809,665,957	4,007,330,675	802,335,282	83.3%	1,519,081,146	52.8%
6/30/17	5,209,368,865	4,446,418,008	762,950,857	85.4%	1,558,183,433	49.0%
6/30/18	5,542,477,610	4,769,765,292	772,712,318	86.1%	1,636,007,948	47.2%
6/30/19	5,809,484,699	5,018,523,615	790,961,084	86.4%	1,665,654,047	47.5%
6/30/20	6,089,401,204	5,118,843,874	970,557,330	84.1%	1,732,243,294	56.0%
6/30/21	6,560,854,343	6,453,161,951	107,692,392	98.4%	1,758,535,339	6.1%
6/30/22	6,998,708,341	6,153,590,531	845,117,810	87.9%	1,864,704,185	45.3%
6/30/23	7,401,637,172	6,402,733,160	998,904,012	86.5%	2,037,530,583	49.0%
6/30/24	7,810,188,015	6,948,147,379	862,040,636	89.0%	2,247,554,088	38.4%

Public School Retirement System of Missouri and Public Education Employee Retirement System of Missouri

Required Supplementary Information

Schedules of Employer Contributions

Public School Retirement System of Missouri

Year Ended June 30	Actuarially Determined Contribution	Actual Employer Contributions	Contribution Excess/ (Deficiency)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2015	$ 666,438,984	$ 656,924,899	$ (9,514,085)	$ 4,530,516,545	14.50%
2016	643,155,536	669,953,683	26,798,147	4,620,370,228	14.50%
2017	642,821,624	684,857,718	42,036,094	4,723,156,676	14.50%
2018	533,062,186	696,970,397	163,908,211	4,806,692,393	14.50%
2019	628,513,916	712,545,096	84,031,180	4,914,104,110	14.50%
2020	679,495,757	724,995,473	45,499,716	4,999,968,779	14.50%
2021	702,442,650	745,638,245	43,195,595	5,142,332,724	14.50%
2022	756,968,491	764,348,407	7,379,916	5,271,368,324	14.50%
2023	771,873,895	792,646,705	20,772,810	5,466,529,000	14.50%
2024	832,366,273	819,926,016	(12,440,257)	5,654,662,179	14.50%

Public Education Employee Retirement System of Missouri

Year Ended June 30	Actuarially Determined Contribution	Actual Employer Contributions	Contribution Excess/ (Deficiency)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2015	$ 105,739,092	$ 103,624,310	$ (2,114,782)	$ 1,510,558,455	6.86%
2016	104,011,593	106,654,638	2,643,045	1,554,732,332	6.86%
2017	108,807,233	111,239,585	2,432,352	1,621,568,294	6.86%
2018	97,653,104	115,103,143	17,450,039	1,677,888,382	6.86%
2019	113,567,475	120,042,046	6,474,571	1,749,884,052	6.86%
2020	119,461,270	124,544,728	5,083,458	1,815,520,816	6.86%
2021	123,733,066	126,877,255	3,144,189	1,849,522,668	6.86%
2022	134,786,669	135,180,782	394,113	1,970,565,335	6.86%
2023	145,744,095	147,463,789	1,719,694	2,149,617,915	6.86%
2024	163,252,197	162,777,627	(474,570)	2,372,851,706	6.86%

Public School Retirement System of Missouri and Public Education Employee Retirement System of Missouri

Required Supplementary Information

Schedules of Investment Returns

Year ended June 30:	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Annual money-weighted rate of return, net of all investment fees and expenses	10.6%	6.1%	-3.0%	28.4%	3.7%	6.9%	8.7%	12.3%	1.6%	4.3%
Time-weighted rate of return, net of all investment fees and expenses	10.6%	6.2%	-3.1%	28.5%	3.7%	6.9%	8.7%	12.3%	1.6%	4.3%

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Notes to the Schedules of Required Supplementary Information

The information presented in the required supplementary schedule was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Changes of assumptions	During fiscal year 2021, comprehensive experience studies were conducted. All economic and demographic assumptions were reviewed and updated where appropriate based on the results of the studies and were effective with the June 30, 2021 valuations. As part of the studies, the payroll growth, salary increases and mortality rates were adjusted to more closely reflect actual experience. The investment rate of return was reduced from 7.5% to 7.3% and the inflation rate was adjusted to 2.0% from 2.25%. The adjustment in inflation also resulted in an adjustment to the COLA assumptions. Due to the passage of Senate Bill 75, selected PSRS retirement rates were amended at the October 30, 2023 Board meeting effective with the June 30, 2023 valuation. There were no other assumption changes for PSRS and no assumption changes for PEERS. Additional information is included in the *Actuarial Section* of this report.
Actuarial Methods and Assumptions:	The actuarially determined contribution rates in the schedule of employers' contributions are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule.
Actuarial Cost Method	Entry Age Normal Level Percent of Payroll
Amortization Method	Closed, level percent for 30 years
Remaining amortization period	
PSRS	17.6 years
PEERS	18.8 years
Asset valuation method	5-year smoothing of actual returns above or below expected returns
Measurement Date	June 30, 2024
Valuation Date	June 30, 2024
Investment Rate of Return	7.30%
Inflation	2.00%
Total Payroll Growth	
PSRS	2.25% per annum, consisting of 2.00% inflation, 0.125% additional inflation due to the inclusion of health care costs in pension earnings, and 0.125% of real wage growth.
PEERS	2.50% per annum, consisting of 2.00% inflation, 0.25% additional inflation due to the inclusion of health care costs in pension earnings, and 0.25% of real wage growth.
Individual Salary Growth	
PSRS	2.625% - 8.875%, depending on service and including 2.00% inflation, 0.125% additional inflation due to the inclusion of health care costs in pension earnings, 0.125% of real wage growth for productivity, and real wage growth for merit.
PEERS	3.25% - 9.75%, depending on service and including 2.00% inflation, 0.25% additional inflation due to the inclusion of health care costs in pension earnings, 0.25% of real wage growth for productivity, and real wage growth for merit.
Cost-of-Living Increases	
	Given that the actual increase in the CPI-U index from June 2023 to June 2024 was 2.97%, the Board approved an actual cost-of-living adjustment ("COLA") as of January 1, 2025 of 2.00%, in accordance with the Board's funding policy and Missouri statutes, compared to an assumed COLA of 1.35%. Future COLAs assumed in the valuation are 1.35%. This COLA assumption is based on the 20-year stochastic analysis of inflation performed in the 2021 experience study, short-term expectation of COLA at the time of the experience study, and application of the Board's funding policy to those expectations. The assumption was re-evaluated for the June 30, 2022 and June 30, 2023 valuations in light of the current inflationary environment, short- and long-term inflation assumptions reflected in the capital market forecasts from various investment advisors and analysts, and volatility of capital market assumptions in recent years. Based on this information, no change was made to the COLA assumption for the June 30, 2022 and June 30, 2023 valuations. At June 30, 2024, the assumption was again revisited and given the current inflationary environment, and the current policy of the Board, no changes were made to the assumption for the current year. Additional information is included in the Actuarial Section of this report.
	The COLA is compounded annually, beginning on the second January after retirement for PSRS and capped at an 80% lifetime increase.
	The COLA is compounded annually, beginning on the fourth January after retirement for PEERS and capped at an 80% lifetime increase.

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Notes to the Schedules of Required Supplementary Information - Continued

Measurement Date June 30, 2024

Valuation Date June 30, 2024

Retirement Rates

Detailed PSRS and PEERS retirement rate assumptions are included in the Actuary Section of this report.

Mortality Assumption

Actives:

PSRS

Experience-adjusted Pub-2010 Teachers Mortality Table for Employees projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

PEERS

Experience-adjusted Pub-2010 General (Below-Median Income) Mortality Table for Employees projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

Non-Disabled Retirees, Beneficiaries and Survivors:

PSRS

Mortality rates for non-disabled retirees and beneficiaries are based on the Pub-2010 Teachers Amount-Weighted Healthy Retiree Mortality Table and the Pub-2010 Amount-Weighted Contingent Survivors Mortality Tables, respectively. The tables are projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the experience-based adjustment factors shown in the tables below at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

	Males	Females
Non-Disabled	1.10	1.04
Contingent	1.18	1.07

PEERS

Mortality rates for non-disabled retirees and beneficiaries are based on the Pub-2010 General (Below-Median Income) Amount-Weighted Healthy Retiree Mortality Table and the Pub-2010 (Below-Median Income) Amount-Weighted Contingent Survivors Mortality Table, respectively. The tables are projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the experience-based adjustment factors shown in the tables below at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

	Males	Females
Non-Disabled	1.13	0.94
Contingent	1.01	1.07

Disabled Retirees

PSRS

Experience-adjusted Pub-2010 Teacher Amount-Weighted Disability Retiree Mortality Table, projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

PEERS

Experience-adjusted Pub-2010 General Employees Amount-Weighted Disability Retiree Mortality Table projected from 2010 to 2018 using the MP-2020 improvement scale and multiplied by the healthy retiree experience-based adjustment factors at all ages for both males and females, with generational improvement after 2018 using the MP-2020 improvement scale.

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Required Supplementary Information

Staff Retiree Health Plan – Defined Benefit OPEB Plan

Schedule of Changes in the Net OPEB Liability and Related Ratios

Year ended June 30:	2024	2023	2022	2021	2020	2019	2018
Total OPEB Liability - beginning of the year	$ 3,256,097	$ 2,996,971	$ 4,394,228	$ 4,129,740	$ 3,885,983	$ 3,788,863	$ 2,050,100
Remeasurement of June 30, 2017 OPEB liability	—	—	—	—	—	—	1,479,740
Service cost	125,469	120,275	195,978	185,640	163,813	151,794	152,625
Interest cost	120,094	115,648	71,403	77,125	98,507	132,375	116,484
Experience (gains) losses	601,545	37,982	(145,912)	45,526	12,551	74,147	110,476
Assumption changes	328,423	2,229	(1,492,405)	65,334	60,354	(259,346)	(104,653)
Plan amendments	—	—	—	—	—	—	—
Benefit payments	(238,421)	(17,008)	(26,321)	(109,137)	(91,468)	(1,850)	(15,909)
Net change in total OPEB liability	$ 4,193,207	$ 3,256,097	$ 2,996,971	$ 4,394,228	$ 4,129,740	$ 3,885,983	$ 3,788,863
OPEB Plan Fiduciary Net Position	$ —	$ —	$ —	$ —	$ —	$ —	$ —
OPEB Liability - end of the year	$ 4,193,207	$ 3,256,097	$ 2,996,971	$ 4,394,228	$ 4,129,740	$ 3,885,983	$ 3,788,863
Covered-Employee Payroll	$ 20,305,965	$ 17,637,507	$ 15,447,108	$ 12,938,669	$ 12,645,475	$ 12,025,626	$ 10,742,062
Employer's Net OPEB Liability as a Percentage of Covered-Employee Payroll	20.7%	18.5%	19.4%	34.0%	32.7%	32.3%	35.3%

Notes to the Schedule of Required Supplementary Information

The plan is funded on a pay-as-you-go basis and is not administered by a formal trust. There were no plan assets as of the date of the most recent valuation. Since there is no invested plan assets held in trust to finance the OPEB obligation, the discount rate is the long-term expected rate of return on the U.S. General Obligation AA Municipal Bond Yield Curve.

This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Schedules of Administrative Expenses

for the year ended June 30, 2024

	PSRS	PEERS	Combined Totals
Personnel services	$ 9,172,015	$ 6,320,620	$ 15,492,635
Professional services			
Actuarial services	190,798	153,834	344,632
Legal services	273,934	33,598	307,532
Financial audit services	57,826	41,874	99,700
Other consultants	49,385	35,515	84,900
Technology consulting	302,515	219,063	521,578
Legislative consulting	62,640	45,360	108,000
Insurance consulting	7,064	5,116	12,180
Total professional services	944,162	534,360	1,478,522
Communications			
Information and publicity	251,652	213,783	465,435
Postage	299,879	254,320	554,199
Member education	12,780	8,520	21,300
Telephone and internet	50,871	36,847	87,718
Total communications	615,182	513,470	1,128,652
Miscellaneous			
Building and utilities	158,594	114,849	273,443
Insurance	103,647	74,919	178,566
Office	606,178	559,348	1,165,526
Staff development	184,012	129,199	313,211
Miscellaneous	344,718	212,882	557,600
Total miscellaneous	1,397,149	1,091,197	2,488,346
Depreciation expense	1,198,577	867,932	2,066,509
Total administrative expenses	$ 13,327,085	$ 9,327,579	$ 22,654,664

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Schedules of Professional Services

for the year ended June 30, 2024

	PSRS	PEERS	Combined Totals
Actuarial services	$ 190,798	$ 153,834	$ 344,632
Legal expenses	273,934	33,598	307,532
Financial audit services	57,826	41,874	99,700
Other consulting	49,385	35,515	84,900
Technology consulting	302,515	219,063	521,578
Legislative consulting	62,640	45,360	108,000
Insurance consulting	7,064	5,116	12,180
Total professional services	$ 944,162	$ 534,360	$ 1,478,522

Public School Retirement System of Missouri and
Public Education Employee Retirement System of Missouri

Schedules of Investment Expenses

for the year ended June 30, 2024

	PSRS	PEERS	Combined Totals
Investment management expenses			
U.S. Treasuries and TIPS	$ 4,763,271	$ 588,719	$ 5,351,990
U.S. public equities	61,904,640	7,651,135	69,555,775
Non-U.S. public equities	38,081,847	4,706,745	42,788,592
Private equity	157,630,417	19,482,411	177,112,828
Private credit	59,857,971	7,398,177	67,256,148
Private real estate	50,007,920	6,180,754	56,188,674
Hedged assets	110,133,732	13,612,034	123,745,766
Total investment management expenses	482,379,798	59,619,975	541,999,773
Investment consultant fees	5,641,196	697,226	6,338,422
Custodial bank fees	1,621,606	200,423	1,822,029
Investment staff expenses	11,193,133	985,990	12,179,123
Commission recapture income	(22,424)	(2,974)	(25,398)
Total investment expenses	$ 500,813,309	$ 61,500,640	$ 562,313,949
Security lending expenses			
Agent fees	$ 2,320	$ 309	$ 2,629
Broker rebates	(8,067)	(1,076)	(9,143)
Total security lending expenses	$ (5,747)	$ (767)	$ (6,514)

Evolve

A managed effort, not a reactionary one

At PSRS/PEERS, we employ strategic planning and take a long-term view to ensure that our organizational evolution is one that fosters and creates improvement, growth and exceptionalism. It is more than change to "keep up" with the times.

Investment Section

Letter from Russell Investments

Russell Investments

October 28, 2024

To the Members of the Board:

Fiscal year 2024 marked another period of significant market repricing across both equity and fixed income markets. In fiscal year 2024, as in the year before, the Systems encountered strong equity markets alongside rising interest rates.

While higher interest rates currently present some challenges for the private credit asset class, expected lower rates in the future are favorable for private credit, private equity and private real estate. These conditions will support the Systems' ability to meet the actuarial assumed rate of return.

For the fiscal year ended June 30, 2024, the Systems achieved an investment return of 10.6%, net of all fees and expenses, and ranked in the 22nd percentile[1] for U.S. Public Plan peers. The fiscal year 2024 investment return underperformed the policy benchmark return of 11.4%. The investment return from alternative asset classes slightly detracted from the Systems' one-year performance as private equity timing lags continued for a second year. The investment program performed extremely well compared to peer relative returns, as well as risk ranked returns. The Systems experienced top quartile returns and bottom quartile risk over 1-,3-,5-, and 10-year periods. The Systems' strategic allocation again benefited from the dominance of U.S. equities in global equity markets.

The strong governance structure, a continued focus on risk management, and a strategic asset allocation designed for the long term continue to serve the Systems' members well, meeting this time of ever-increasing complexity in the capital markets with resilience.

Finally, we at Russell have valued our partnership with Missouri PSRS/PEERS and look forward to another productive year and the opportunities ahead in the capital markets.

Sincerely,

Michael Hall
Managing Director

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[1]Public Plans greater than $1 billion in the InvMetrics universe.

Letter from the Chief Investment Officer

PSRS/PEERS
PUBLIC SCHOOL & EDUCATION EMPLOYEE
RETIREMENT SYSTEMS OF MISSOURI

December 4, 2024

To the Members of the Systems:

On behalf of the Board of Trustees and the internal investment staff, I present the following report on the Systems' investments for the fiscal year ended June 30, 2024. The theme for this year's Financial Report is ***Evolve***, which is a concept needed in managing a long-term investment portfolio. Specifically, planning, persistence and evolution are all required to achieve long-term investment success. The strategic investment philosophy for PSRS/PEERS has persisted for over two decades. However, that philosophy has evolved over time as the Systems embraced asset allocation changes that improved the long-term investment trajectory for PSRS and PEERS.

The investment backdrop for fiscal year 2024 was marked by high interest rates, continued inflation, significant geopolitical concerns, and a U.S. stock market that hit new highs throughout the year. The Systems' investment in global stocks was the primary driver for strong fiscal year 2024 total fund performance while diversification into other asset classes was (mostly) supportive to the performance. The PSRS and PEERS investment return was 10.8% (or 10.6% net of all fees and expenses) for fiscal year 2024.

Key Points within this year's Financial Report

As you review the financial information in this report for the fiscal year ended June 30, 2024, it is important to be aware of the following points:

- The PSRS and PEERS investment returns for the last five and ten years, exceeded 74% of the peer group as defined by the Wilshire TUCS universe of public pension plans with assets in excess of $1 billion.
- The Systems have generated the investment returns while taking less risk (as measured by standard deviation) than the policy benchmark[1] and less risk than two-thirds of comparable public funds over all time periods.
- The PSRS and PEERS internal investment staff and external investment managers added value above the policy benchmark of over $6.5 billion net of all fees and expenses over the last 10 years. This outperformance was due to portfolio construction by internal Investment Staff as well as active management on the part of external managers.
- The PSRS and PEERS investment returns for the last 10-year time period exceeded the return of a passive portfolio of 60% global stocks and 40% bonds by 1.9% per year, resulting in added value above a traditional portfolio of $11.6 billion.
- The investment returns reported throughout this publication are mostly net of investment fees and expenses. The investment return net of all fees and expenses was 10.6% for PSRS and PEERS.
- Investment performance throughout this report is calculated using a time-weighted rate of return based on fair values.
- The total invested assets of both PSRS and PEERS was $58.7 billion on June 30, 2024, making the combined entity larger than all other public retirement plans in the State of Missouri combined, and the 44th largest defined benefit plan in the United States.

[1]The plan policy benchmark is a standard to measure investment performance and indicates the return of the PSRS/PEERS asset allocation if passive market rates of return were achieved.

Fiscal Year 2024 Year in Review

The internal investment staff, under the direction of the PSRS and PEERS Board of Trustees, has adopted a disciplined and diversified investment portfolio that includes allocations to multiple asset classes. Over time, each specific asset class within the Systems' investment portfolio performs a valuable function.

Investments in publicly traded stocks produced substantial returns in fiscal year 2024. U.S. stocks returned 23.1% for the fiscal year ended June 30, 2024 (as measured by the Russell 3000 Index), non-U.S. developed stocks moved 11.5% higher (as measured by the MSCI EAFE Index), and emerging market stocks increased 12.6% (as measured by the MSCI Emerging Markets Index). Interest rates continued to increase as the yield on the 10-year Treasury note moved from 3.81% at the beginning of the fiscal year to 4.36% on June 30, 2024. This increase in yield muted total returns for bonds as the Bloomberg U.S. Treasury Index increased 1.6% in fiscal year 2024.

The PSRS and PEERS non-traditional asset classes (private equity, private credit, private real estate and hedged assets) provided mostly positive support to the overall investment return in fiscal year 2024. The Private Equity portfolio returned 5.2% for the year, but more importantly, has delivered a 16.1% annualized return over the five years ending June 30, 2024. The Hedged Asset program increased 11.9% in fiscal year 2024, offering both excellent returns and substantial diversification benefits to other parts of the portfolio. The Private Credit portfolio continued to produce very consistent returns in a variety of market environments, producing an absolute return of 9.7% for the year. Finally, the Real Estate portfolio was written down (-5.0% return) in fiscal year 2024. However, this result was substantially better than the overall real estate market, providing excellent downside protection.

The PSRS and PEERS investment return was enhanced by excess return (alpha) in a few asset classes. The alpha was a direct result of effective implementation through both security selection and portfolio construction. For example, the Systems' Real Estate portfolio[2] and Non-U.S. Equity portfolio[3] outperformed their assigned benchmarks by 5.0% and 6.7%, respectively, in fiscal year 2024. From a tactical standpoint, the internal investment staff maintained an overweight to both U.S. and non-U.S. equity throughout the year. Additionally, the Systems were overweight to cash due to attractive short-term interest rates. The overweight to stocks and cash were additive to total portfolio performance for the year.

Fiscal Year 2025 Focus

The Systems have a best-in-class governance structure that is based on continuity and stability but importantly, promotes evolution and change. As such, the focus of the investment team in fiscal year 2025 will continue to be centered on two primary objectives: (1) Strengthening the investment department infrastructure, and (2) Driving long-term (net) investment returns that can directly benefit the PSRS/PEERS membership.

The build-out of the **investment department infrastructure** began over a decade ago as the investment portfolio grew in both size and complexity. The total market value of invested assets of PSRS and PEERS was $23.6 billion at the close of fiscal year 2009 versus $58.7 billion at the close of the most recent fiscal year. The asset growth and introduction of new asset classes required the addition of investment staff. The most recent phase of the infrastructure growth includes the initiation of several technology projects that will provide our staff with the opportunity to monitor and evaluate a growing portfolio more intensely and efficiently. The technology will result in better investment decision making but will also improve operational efficiency. The outcome will be better results, net of all fees and expenses, over the long term.

Continuity of an investment staff and the ability to maintain a long-term investment strategy drives strong investment performance. The Board has maintained a consistent investment philosophy for almost two decades and the Systems have a high-level investment staff, including eight investment professionals who have worked together at PSRS/PEERS for over 15 years. To maintain this continuity, the Systems are deepening the team and executing thoughtful succession planning.

[2]*Benchmark: NFI-ODCE net Index*
[3]*Benchmark: MSCI ACWI ex U.S. net Index*

Letter from the Chief Investment Officer, continued

The primary concentration of the investment team is to execute on the basic blocking and tackling of managing a large institutional investment portfolio. However, we will always have a focus on **improving long-term investment performance, net of all fees and expenses** by continuing to spend time in three key areas: (1) private market co-investments and direct investments, (2) managing investment fees, and (3) sourcing new investment ideas.

The internal investment staff initiated a private equity co-investment program in 2014 to allow the Systems to make direct investments in private companies alongside private equity managers with whom PSRS/PEERS have an existing relationship. The investment staff implemented a similar program within private credit in fiscal year 2020 that allows the Systems to lend directly to private operating businesses across various industries. Both the equity and lending opportunities are researched and vetted by both internal investment staff and an external consultant. The private equity co-investment and direct credit investments are compelling because they are executed with no direct investment fees and no performance-based fees. To date, the combined programs have generated total fee savings of approximately $504 million relative to traditional private investments.

PSRS/PEERS remain aggressive in negotiating, or re-negotiating, investment contracts at the most appropriate fees for the Systems. Additionally, we continue to review opportunities to move some limited programs in-house to reduce external investment fees. Each of these efforts results in better net of fees returns for the Systems.

Finally, the PSRS/PEERS team remains focused on prudently sourcing ideas and investing in opportunities that will not only protect the Systems' capital but produce attractive returns over the longer term. The internal PSRS/PEERS investment team reviewed over 100 individual investment deals in the last fiscal year and will continue that pace into the future.

Fiscal Year 2025 Macro

As I write this annual letter in early December 2024, we are five months into fiscal year 2025 and have finally completed the U.S. election cycle. The investment markets remain strong with the S&P 500 currently on pace for its highest calendar year return since 1997. The Federal Reserve has decreased rates on two occasions in 2024 (so far) with expected decreases (at an unknown pace) in calendar year 2025. Broad stock market returns will most likely moderate in the future following much higher than expected returns the last two years. The PSRS/PEERS asset allocation will always be balanced with a significant investment in return-seeking assets such as stocks but also diversification into private assets and more defensive investments such as Treasury securities, cash and hedged assets. We would expect asset classes other than stocks to contribute more to the Systems total investment return in fiscal year 2025.

Conclusion

Under the support and guidance of the Board of Trustees, we continue to **plan** for the long-term, **persevere** through market cycles and **evolve** as needed to meet the complexities of an ever-changing investment landscape. As always, we will work to produce long-term investment returns that provide our 316,000 retirees, active teachers, and school employees with the financial security they have earned and deserve.

Respectfully,

Craig A. Husting, CFA
Chief Investment Officer

Investment Policy Summary

The Board of Trustees of the Public School Retirement System of Missouri and Public Education Employee Retirement System of Missouri (PSRS and PEERS, also referred to as the Systems) is charged with the responsibility of investing the assets of the Systems in a manner consistent with the fiduciary standards set forth in the 'prudent person' rule. To that end, the Board has adopted the following principles to guide all investment-related decisions:

1. Act in the exclusive interest of the members of the Systems,
2. Maximize total return within prudent risk parameters, and
3. Preserve the long-term purchasing power of the Systems.

The investment portfolios of PSRS and PEERS represent all contributions to the plans, from members and their employers, as well as all net earnings on these assets. These funds are held in support of both current and future liabilities. In total, approximately 63% of every dollar used to pay retirees is generated from investment earnings[1].

The Board of Trustees of PSRS and PEERS approved the commingling of assets for purposes of investment as allowed by state statute in January 2013. In order to implement this change, PSRS and PEERS adopted the Missouri Education Pension Trust Agreement (MEPT), which is managed by the PSRS and PEERS Board of Trustees and Investment Staff. Effective July 1, 2013, the invested assets of the Systems were pooled and invested in MEPT. All assets held by MEPT are for the exclusive benefit of PSRS and PEERS. Each of the Systems has equity in MEPT based on funds contributed and earnings allocated. Earnings of MEPT are allocated based on the average daily balances of each of the respective Systems. Individual investments in MEPT are not specifically identified to the respective Systems. Due to the fact all invested assets are invested in MEPT, the rate of return for each of the Systems is approximately the same. Therefore, the following discussions focus on MEPT in total and not the individual Systems.

Roles and Responsibilities

Board of Trustees

It is the responsibility of the Board of Trustees (Board) to establish and maintain policies and objectives for all aspects of the Systems' investment program including the determination of long-term policies for risk tolerance and asset allocation.

In keeping with its obligation to serve as the governing fiduciary, any changes to the investment policy or investment implementation manuals require the Board's approval.

As one of the largest public pension funds in the United States, the Systems' operational requirements are complex. In order to properly administer the Systems and carry out investment strategies, the Board relies heavily on both internal staff and external service providers. Due to the number of parties involved, their roles as fiduciaries are clearly identified to ensure distinct lines of responsibility and proper controls exist, while providing increased operational efficiency and elimination of duplication of effort.

Executive Director

The Executive Director (Director) is appointed by, and serves at the pleasure of the Board. The Director is responsible for planning, organizing and administering all operations of the Systems under the broad policy guidance and direction of the Board. The Director, with the assistance of the investment staff, monitors the performance of the investment portfolio; ensures that funds are invested in accordance with Board policies; and ensures that proper internal controls are developed to safeguard the assets of the Systems. In fulfilling these responsibilities, the Director relies heavily on the Chief Investment Officer and external asset consultants.

Chief Investment Officer

The Chief Investment Officer (CIO) serves at the pleasure of the Director yet has a direct link to the Board on investment-related issues. The CIO's primary access to the Board includes, but is not limited to, submission of investment reports, information, or communications required by the investment policy and any other information or opinions specifically requested by the Board with regard to the investment program. The CIO is the individual primarily responsible for providing

[1] *Based on a twenty-five year average for fiscal years 2000-2024.*

direction for the investment program. It is the CIO's responsibility to work with the Director, the general consultant, specialty consultants, and other external service providers, with the assistance of the internal staff, in advising the Board on policies related to the investment program. The CIO has responsibilities related to hiring and terminating service providers.

Critical functions of the CIO include recommendations for implementation decisions related to the investment plan and for the strategic allocation of the portfolio within broad ranges approved by the Board.

External Asset Consultants

The Systems employ Russell Investments (Russell) as a general consultant and Albourne America, LLC (Albourne), Pathway Capital Management (Pathway) and The Townsend Group (Townsend) as specialty consultants. Russell is an independent resource available to collaborate with the Board and staff on the investment process. This typically includes regular meetings with the Board to provide an independent perspective on the Systems' goals, structure, performance and external service providers. Additionally, Russell may be involved with the strategic allocation shifts for the portfolio.

The specialty consultants work on specific programs within the overall investment program. Albourne is utilized for the Private Credit, Private Equity, Hedged Assets and Alpha Overlay programs. Pathway is a consultant for the Private Equity and Private Credit programs and Townsend consults on the Private Real Estate program.

External Investment Managers

The Systems employ external investment managers. The external money managers may be structured as public or private entities in the form of a partnership, limited liability company, trust, separately managed account, commingled account, or some other form of operational structure in which assets may be held by an external custodian selected and monitored by the external manager.

Managers are given explicit written directions detailing their particular assignments or they follow the investment program outlined in their offering documents or Limited Partnership Agreements, and will construct and manage investment portfolios that are consistent with the investment philosophy and disciplines for which they were hired. Discretion is delegated to the managers to carry out investment actions as directed by the Systems.

Master Custodian

JP Morgan Chase Bank, NA (JP Morgan) serves as the master custodian for the Systems. The master custodian holds most cash and securities for the Systems, except in cases where investment in a partnership, commingled account, or unique asset class makes it impossible to do so. The Systems thoroughly evaluate the structure of all investments and their custody arrangements. JP Morgan is responsible for providing the official book of record for investment performance reporting and accounting, and serves as an additional layer of risk control in safekeeping the Systems' assets.

Investment Objective

Based on the long-term investment returns available from a well-diversified, prudently invested portfolio, the Board has adopted an objective to achieve a **total nominal investment return of 7.3% with a real rate of return of at least 5.3% per annum over time**.[2] The long-term investment return objective of 7.3% became effective for fiscal year 2022 investment performance. The investment objective was previously 8.0% effective from 1980 through fiscal year 2016, 7.75% effective for fiscal year 2017, 7.6% effective for fiscal year 2018 and 7.5% effective for fiscal year 2019 through fiscal year 2021.

In order to achieve the investment objective, the Systems have developed a portfolio that is prudently invested across a broad array of assets that reflects the long-term nature of the Systems' pension obligations. The principles of diversification, risk control and competitive rates of return provide the framework for selecting an asset allocation that is expected, over longer periods of time and in the aggregate, to give the Systems the most competitive long-term return within a prudent level of risk.

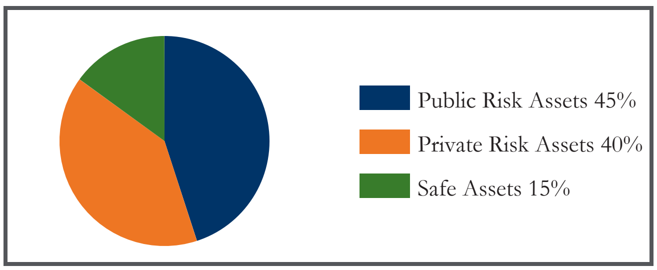
[2] *The real rate of return is the rate by which the long-term total return exceeds the long-term inflation rate. The Board of Trustees shall employ an actuarial consultant for purposes of determining the inflation rate to be used in calculating the pension obligations. The assumed inflation rate as of June 30, 2024 was 2.0% per annum.*

Understanding Risk

Selection of an appropriate asset allocation is one of the most important decisions made by a retirement plan. Within that asset allocation, it is important to not only consider the expected investment return, but also to understand the risks. The importance of risk consideration for institutional investors is critical to long-term success. To that end, the Systems employ an effective and intuitive risk-based approach to setting and reporting the asset allocation decision. The Systems developed a risk-based asset allocation to clearly define the prudent risks taken within its investment portfolios. The Systems consider a variety of risks including, but not limited to, liquidity risk, volatility, tail risk (the possibility that an investment will move much more than expected) and the ability to meet the Systems' assumed rate of return when structuring the portfolio.

This analysis results in an asset allocation to Public Risk Assets, Safe Assets and Private Risk Assets. The target risk-based asset allocation is illustrated in the pie chart below. During fiscal year 2022, the Board of Trustees increased the Private Risk Assets target by 5% to 40% and proportionately decreased the Safe Assets target to 15%. These changes are discussed further in the following Asset Allocation section. Within each risk allocation, the Systems' investment portfolio includes long-term commitments to specific asset programs.

Target Risk Based Asset Allocation



Asset Allocation

The asset allocation decision is generally regarded as the most important decision in the investment management process since it is crucial to achieving the long-term objectives established by the Board. In that light, it is the Board's responsibility to determine the appropriate policy asset allocation based upon several criteria with input and guidance from internal staff and Russell. These criteria are as follows:

1. The expected rate of return for each asset classification;
2. The expected risk of each asset classification (expressed as the standard deviation of the rate of return);
3. The correlation of returns between asset types;
4. The investment objectives and risk constraints of the Systems (including, but not limited to, liquidity needs and the expected time horizon);
5. The funded ratio and cash flow requirements for PSRS and PEERS; and
6. The impact of the Systems' return volatility on the contribution rate.

The Board of Trustees most recently amended the long-term target asset allocation during fiscal year 2022 as a result of the 2022 asset allocation/liability study. The allocation to each investment program considers both the risk tolerance of the Systems and the long-term return objective. The new long-term target asset allocation is expected to maintain similar levels of total portfolio risk while allowing for more efficient investment returns. However, given the nature of investing in Private Risk Assets, it is expected to take several years to implement through a disciplined investment approach. The policy benchmarks will change over time as the Systems make meaningful progress to the new long-term targets. The changes to the asset allocation were as follows: Private Risk Assets increased by 5% to 40% and Safe Assets decreased by 5% to 15%. Within Safe Assets, U.S. Treasuries decreased from 20% to 15% and within Private Risk Assets, Private Equity increased from 16% to 21%.

The following chart details the long-term target and interim target asset allocations for fiscal year 2024. The interim policy allocations have been established to reflect the continued funding of Private Risk Assets and the progress towards the Systems' long-term asset allocation objective. For performance measurement purposes, the interim policy will serve as the basis for establishing the total plan policy benchmark until the on-going process of funding Private Risk investments is meaningfully complete.

Target Asset Allocation and Policy Ranges

	Fiscal Year 2024	As Amended in 2022	
Investment Type	**Interim Target**	**Long-Term Target**	**Policy Ranges**
Public Risk Asset Programs			
U.S. Public Equity	24.0%	23.0%	15% - 45%
Public Credit	0.0%	0.0%	0% - 10%
Hedged Assets	6.0%	6.0%	0% - 25%
Non-U.S. Public Equity	16.0%	16.0%	8% - 28%
Total Public Risk Assets	**46.0%**	**45.0%**	**35% 70%**
Safe Assets Programs			
U.S. Treasuries	18.0%	15.0%	0% - 40%
U.S. TIPS	0.0%	0.0%	0% - 30%
Cash & Cash Equivalents	0.0%	0.0%	0% - 10%
Total Safe Assets	**18.0%**	**15.0%**	**10% 40%**
Private Risk Asset Programs			
Private Equity	19.0%	21.0%	4% - 28%
Private Real Estate	11.0%	11.0%	4% - 15%
Private Credit	6.0%	8.0%	0% - 12%
Total Private Risk Assets	**36.0%**	**40.0%**	**10% 50%**
Total Fund	**100.0%**	**100.0%**	

The Board recognizes the cyclical nature of the investment markets and it has allowed the internal staff to capitalize upon opportunities by changing the allocation of each asset class or sub-asset class within broad strategic bands or policy ranges (as indicated in the previous table). The flexibility given to the internal staff in establishing the strategic mix provides opportunities for the Systems to take advantage of changing market conditions. To ensure appropriate controls, the Director, CIO and Russell must unanimously agree upon all material strategic changes prior to implementation.

Total Plan Leverage

The Board of Trustees approved the use of total plan leverage in fiscal year 2020. Leverage may be utilized (through futures, swaps, or other derivative instruments) to efficiently implement portfolio rebalancing and/or to apply modest leverage to total plan assets. The total direct leverage at the fund level shall not exceed 10% of the portfolio.

Performance Objectives and Monitoring Process

Generating a total nominal rate of return net of expenses of at least 7.3% and a real rate of return net of expenses of at least 5.3% per annum is an important consideration in the asset allocation decision and the primary performance objective for the Systems over long periods of time. The need for a long-term focus is necessary to preclude the temptation to overreact to events in the financial markets that have no relevance to long-term asset/liability management of the Systems. The resulting dilemma is the conflicting requirement to evaluate investment policy implementation over shorter time periods while maintaining a long-term focus on meeting the return objectives. In order to determine if the Systems' short-term and long-term objectives are being achieved, the Board evaluates performance relative to policy and strategic benchmarks. The policy benchmarks allow the Systems to be judged by performance relative to a defined set of broad market indices (i.e., the Systems' long-term asset allocation objective). The strategic benchmarks allow the Board to consider the additional value generated from the latitude given to the

internal staff to alter the asset class or sub-asset class allocations.

Policy Decisions

The value added through policy decisions is measured by the difference between the policy benchmark return and the actuarial required rate of return objective (defined as Real Return Objective + Inflation). A policy benchmark return greater than the actuarial required rate of return reflects value added. A policy benchmark return less than the actuarial required rate of return reflects losses or shortfalls in performance in funding the liabilities of the Systems. These policy decisions are measured over long periods of time.

Strategy Decisions

Strategy decisions are asset class or sub-asset class allocation choices made by the internal staff to deviate from the policy benchmark weights, with approval from the Director, CIO and Russell that the proposed material deviation is in compliance with the Board's investment policy. The value added through the decisions to overweight and/or underweight these sub-asset classes is measured by the difference between the strategic benchmark return and the policy benchmark return. This difference captures the value added by internal staff through asset class or sub-asset class strategic decisions relative to the Board's broad policy allocation decisions. A strategic benchmark return greater than the policy benchmark return reflects value added through the allocation decisions. A strategic benchmark return less than the policy benchmark return reflects losses to the fund's performance based upon strategy decisions.

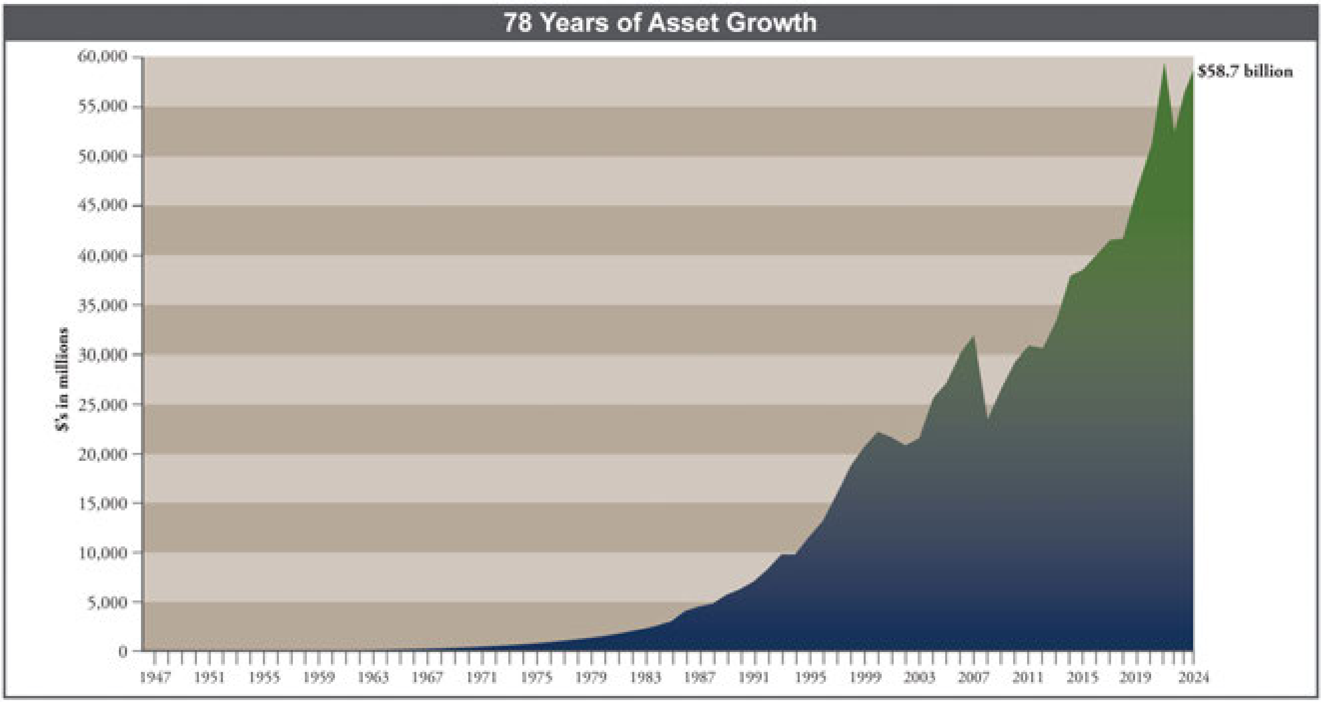
Implementation Decisions

Implementation decisions are manager selection choices made by the internal staff with the approval of the Director, CIO, Managing Director and a consultant(s). The value added through these manager selection decisions is measured by the difference between the actual portfolio return and the strategic benchmark return. An actual portfolio return greater than the strategic benchmark return reflects value added through these manager selection decisions. An actual portfolio return less than the strategic benchmark return reflects losses to the fund's performance based upon implementation decisions.

Risk Controls

The Board recognizes that even though the Systems' investments are subject to short-term volatility, it is critical that a long-term investment focus be maintained. Given the importance of the broad asset allocation decision to the Systems' long-term investment success, internal staff is required to conduct an asset allocation/liability study at least every five years to examine the appropriate long-term investment strategies for the Systems. As previously discussed in the asset allocation section, an asset/liability study was most recently conducted in fiscal year 2022. In addition, the CIO must annually evaluate the asset allocation mix and any strategic allocation of the portfolio and provide a report to the Board on the results of that evaluation. This ongoing review of the asset allocation process helps to ensure the asset allocation is being monitored and modified as needed to meet the financial obligations of the Systems.

Total Fund Review



The Systems' total invested assets were $58.7 billion as of June 30, 2024. The graph above illustrates the long- term growth in assets since the inception of PSRS in 1946 and PEERS in 1965.

Investment Performance[3]

The Systems earned an investment return of 10.8% for fiscal year 2024 (10.6% net of all investment expenses and fees) with an ending fair value of invested assets of $58.7 billion. The Systems' well-structured investment portfolio added approximately $5.7 billion in investment earnings to the growth of assets during the year.

As illustrated in the following table, the Systems' Public Risk Assets performed especially well for the year with all three investment programs producing double digit returns. Driven by strong equity market returns, the U.S. Public Equity portfolio returned 22.6% and the Non-U.S. Public Equity portfolio increased 18.3%. Within Private Risk Assets the Private Credit portfolio also did well producing a 9.7% return for the year. Each of these asset classes strongly contributed to the total return of the Systems while providing diversification from the Private Real Estate markets.

Total Fund Performance

Investment Program	Total Return	Weighted Contribution
U.S. Public Equity	22.6%	5.7%
Hedged Assets	11.9%	1.0%
Non-U.S. Public Equity	18.3%	3.1%
Public Risk Assets	**19.4%**	**9.8%**
U.S. Treasuries	0.9%	0.1%
U.S. TIPS	4.3%	0.0%
Cash & Cash Equivalents	5.2%	0.1%
Safe Assets	**1.7%**	**0.2%**
Private Equity	5.2%	0.9%
Private Real Estate	-5.0%	-0.5%
Private Credit	9.7%	0.4%
Private Risk Assets	**2.7%**	**0.8%**
TOTAL RETURN	**10.8%**	**10.8%**

[3] *Investment returns were prepared using a time-weighted rate of return based on fair values.*

Investment Performance Relative to Benchmarks*	Fiscal Year	3-Year	5-Year	10-Year
Public Risk Assets Program				
U.S. Public Equity	**22.6%**	**7.6%**	**13.1%**	**11.3%**
Russell 3000 Index	23.1%	8.1%	14.1%	12.2%
Hedged Assets	**11.9%**	**4.6%**	**5.9%**	**5.1%**
Hedged Assets Benchmark	11.4%	1.9%	5.8%	5.3%
Benchmark consists of:				
50.0 % Bloomberg U.S. Intermediate Credit Index				
25.0 % MSCI ACWI ex-USA net Index				
25.0 % Russell 3000 Index				
Non-U.S. Public Equity	**18.3%**	**5.2%**	**9.7%**	**7.4%**
MSCI ACWI ex-USA net Index	11.6%	0.5%	5.6%	3.8%
Total Public Risk Assets	**19.4%**	**6.5%**	**10.6%**	**8.7%**
Public Risk Assets Policy Benchmark	17.5%	5.0%	9.6%	8.0%
Benchmark consists of:				
55.4 % Russell 3000 Index				
38.1 % MSCI ACWI ex-USA net Index				
6.5 % Bloomberg U.S. Intermediate Credit Index				
Safe Assets Program				
Total Safe Assets	**1.7%**	**-2.9%**	**-0.4%**	**0.8%**
Bloomberg U.S. Treasury Index	1.6%	-3.3%	-0.8%	0.7%
Private Risk Assets Program				
Private Equity	**5.2%**	**6.1%**	**16.1%**	**15.3%**
Private Equity Benchmark	20.2%	6.2%	12.2%	11.2%
Benchmark consists of:				
75.0 % Russell 3000 Index				
25.0 % MSCI ACWI ex-USA net Index				
Private Real Estate	**-5.0%**	**5.0%**	**6.0%**	**7.9%**
NFI-ODCE net Index	-10.0%	1.0%	2.3%	5.4%
Private Credit	**9.7%**	**10.0%**	**9.8%**	**7.7%**
ICE BofA U.S. High Yield Index	10.5%	1.7%	3.7%	4.2%
Total Private Risk Assets	**2.7%**	**6.5%**	**12.3%**	**12.2%**
Private Risk Assets Policy Benchmark	8.8%	4.6%	8.2%	8.7%
Benchmark consists of:				
39.6 % Russell 3000 Index				
30.5 % NFI-ODCE net Index				
13.2 % MSCI ACWI ex-USA net Index				
16.7 % ICE BofA U.S. High Yield Index				
TOTAL FUND				
Total Fund	**10.8%**	**4.6%**	**8.9%**	**7.9%**
Total Fund Policy Benchmark	11.4%	3.0%	7.1%	6.6%
Benchmark consists of:				
39.8% Russell 3000 Index				
22.2% MSCI ACWI ex-USA net Index				
18.0% Bloomberg U.S. Treasury Index				
11.0% NFI-ODCE net Index				
6.0% ICE BofA U.S. High Yield Index				
3.0% Bloomberg U.S. Intermediate Credit Index				
Actuarial Required Rate of Return **	**7.3%**	**7.3%**	**7.4%**	**7.6%**
TUCS Universe Median	**10.5%**	**4.0%**	**8.3%**	**7.5%**

* *Investment returns were prepared using a time-weighted rate of return based on fair values.*
** *The extended time periods reflect the blended returns of the historical actuarial required rates of return, as previously discussed in the Investment Objective section.*

Investment Performance Relative to Benchmarks

The Board has established a long-term objective (actuarial required rate of return) to achieve a total investment return of at least 7.3% per year and a real rate of return of at least 5.3% per year. The fiscal year 2024 total plan return of 10.8% exceeded the long-term objective of 7.3%. Over long periods of time, PSRS and PEERS continue to produce investment returns that meet or exceed the Systems' objective. The annualized investment return for the Systems is 8.1% (7.9% net of all investment expenses and fees) over the last 30 years.

In order to determine if the Systems' short-term and long-term objectives are being achieved, the Board utilizes three benchmarks by which the Systems' progress may be judged: (1) performance relative to a **policy benchmark** (defined set of broad market indices that reflects the Systems' long-term asset allocation, or market beta), (2) performance relative to a **strategic benchmark** which indicates value added by the internal staff, and, to a lesser extent, (3) performance relative to other public pension systems and their investment managers as a reference point of oversight.

The internal staff presents to the Board a detailed attribution of the total fund performance at the end of each fiscal year. Value is added over and above expected market returns if the strategic benchmark exceeds the policy benchmark (i.e., the internal staff made positive strategic decisions) and/or if the actual total fund return exceeds the strategic benchmark (i.e., positive implementation decisions). The Statistical Performance section on the following page shows that for all extended time periods the total fund return exceeded the strategic benchmark, and the strategic benchmark exceeded the policy benchmark. These excess returns demonstrate the significant added value by internal staff through both strategic asset allocation decisions and implementation decisions over time.

The fiscal year 2024 return of 10.8% (10.6% net of all investment expenses and fees) underperformed the policy benchmark return of 11.4% by 60 basis points. However, the total fund return has exceeded the policy benchmark in six of the last ten fiscal years. Over longer periods of time, the Systems' five-year return of 8.9% outperformed the policy benchmark return of 7.1% by 180 basis points on an annualized basis. Over the ten-year time period, the total fund return has exceeded the policy benchmark by 130 basis points, on an annualized basis, resulting in over $6.5 billion in excess performance (net of all investment expenses and fees) to the Systems, indicating that internal staff and active investment management have added value to the Systems. Performing well over time, during periods of both strong and weak markets, signifies the Systems' well structured and diversified investment portfolio's ability to deliver higher returns and lower risk than the policy benchmark.

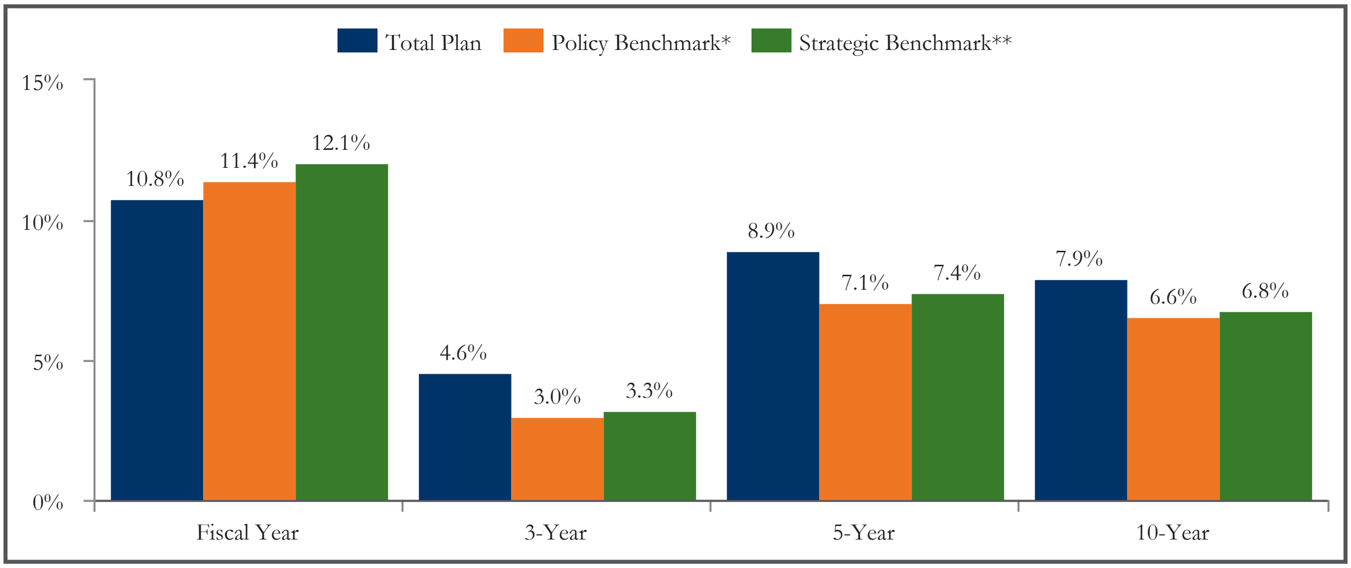
The Systems utilize the Trust Universe Comparison Services (TUCS) to compare the total return and risk levels of the Systems relative to other public pension funds with assets in excess of $1 billion. As the chart on page 71 indicates, the total fund return has exceeded the median return of other large public funds over all time periods. The Systems have taken substantially less risk than comparable funds during all time periods yet have consistently provided higher long-term investment returns.

Statistical Performance

One of the primary investment objectives of the Systems is to achieve returns similar to the market but at lower risk or volatility levels. To that end, internal staff monitors a number of quantitative risk statistics related to the total investment portfolio as well as individual composites. The following table indicates that the Systems have taken less risk than the policy benchmark (as measured by standard deviation) over all time periods while achieving higher long-term returns, thereby indicating strong risk-adjusted performance.

Beta measures the volatility, or systematic risk, of a security or portfolio in comparison to the market as a whole. If a portfolio has a beta of 1.0, it indicates that the portfolio moves in unison with the market. The Systems' portfolio has a beta of less than 1.0 relative to the policy benchmark, indicating less market volatility. The Systems' beta relative to the MSCI All Country World Index (MSCI ACWI net Index) is less than 0.50. This signifies that the Systems' portfolio moves up or down approximately less than half as much as the world stock index.

Total Plan Performance



Total Plan Statistical Performance

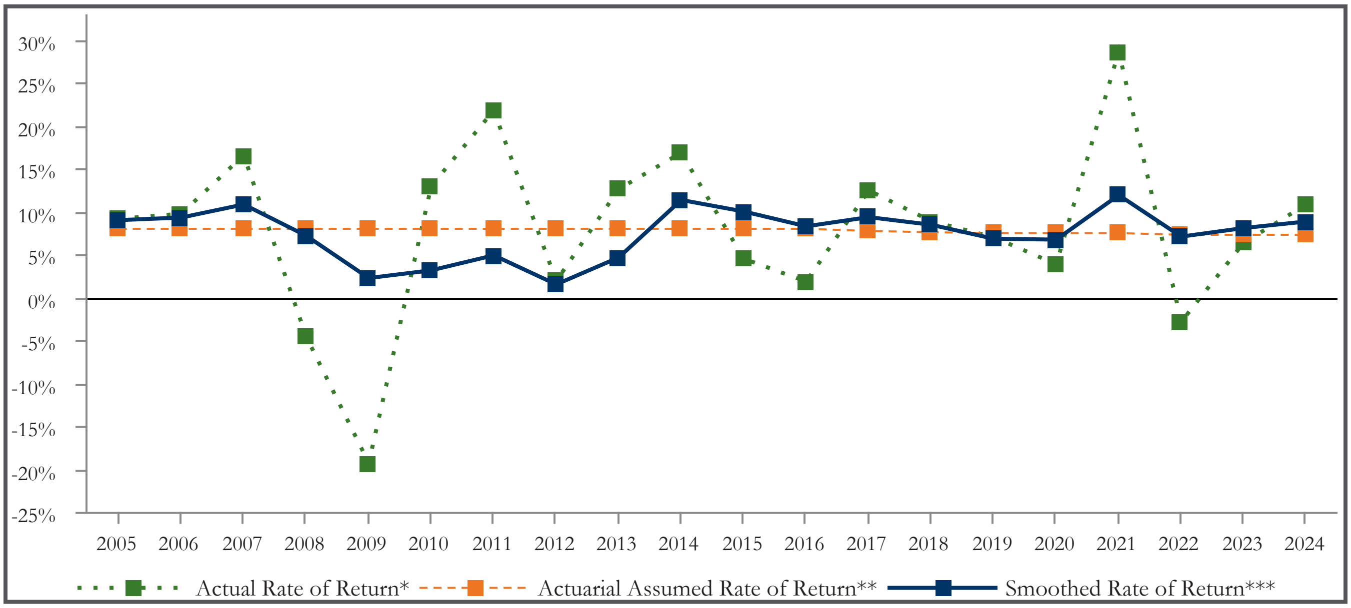
Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Total Plan Return	10.8%	4.6%	8.9%	7.9%
Annualized Policy Benchmark Return*	11.4%	3.0%	7.1%	6.6%
Annualized Strategic Benchmark Return**	12.1%	3.3%	7.4%	6.8%
Excess Return	-0.6%	1.6%	1.8%	1.3%
Annualized Standard Deviation of Composite	6.6%	7.6%	8.2%	6.9%
Annualized Standard Deviation of Policy Benchmark*	10.4%	11.6%	11.4%	9.3%
Beta to Policy Benchmark*	0.62	0.64	0.70	0.73
Beta to MSCI ACWI net Index	0.46	0.44	0.46	0.46

* *As of June 30, 2024: 39.8% Russell 3000 Index, 22.2% MSCI ACWI ex-USA net Index, 18% Bloomberg U.S. Treasury Index, 11% NFI-ODCE net Index, 6% ICE BofA U.S. High Yield Index, and 3% Bloomberg U.S. Intermediate Credit Index.*

** *As of June 30, 2024: 41.8% Russell 3000 Index, 24.2% MSCI ACWI ex-USA net Index, 12.5% Bloomberg U.S. Treasury Index, 9.5% NFI-ODCE net Index, 5.4% ICE BofA U.S. High Yield Index, 4.1% Bloomberg U.S. Intermediate Credit Index, and 2.5% ICE BofA 3-Month U.S. Treasury Note Index. The Total Plan Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.*

The following chart shows the relationship between fair value returns (actual rate of return), the actuarially assumed rate of return and the utilization of an actuarial asset valuation method of smoothed assets. To reduce volatility in employer and employee contribution rates, a common actuarial practice of "asset smoothing" is utilized. The application of this practice results in full recognition of returns at the actuarial assumed rate and recognizes any annual excess or deficiency relative to the assumed rate over a period of five years.

Investment Rates of Return



* *The Actual Rate of Return (fair value return) consists of all investment gains and losses (net of investment expenses) on the fair value of assets each year.*

** *The Actuarial Assumed Rate of Return is the assumed rate of return on the actuarial value of assets and is used in establishing contribution rates and funding obligations.*

*** *Investment earnings in excess or deficient of the assumed rate of return are smoothed over a 5-year period for actuarial funding purposes. Twenty percent of the excess or deficiency is recognized annually for a 5-year period. This calculation results in the Smoothed Rate of Return.*

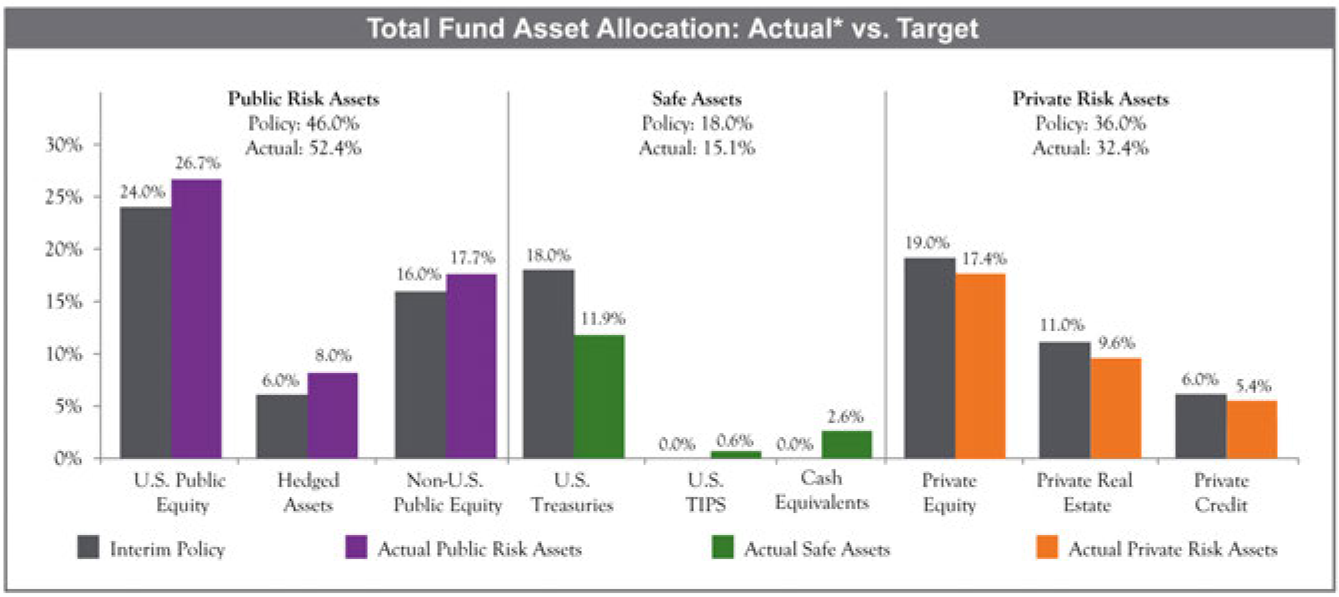
Asset Allocation: Actual Versus Target

The long-term target asset allocation is expected to take several years to implement given the nature of investing in Private Risk Assets. As discussed in the Investment Policy Summary: Asset Allocation section, the interim policy allocations have been established to reflect meaningful progress towards the new long-term targets and for policy benchmark weights.

The June 30, 2024 interim policy allocation was 46% Public Risk Assets, 18% Safe Assets and 36% Private Risk Assets. During fiscal year 2024 there were no changes to the interim policy allocations.

As illustrated in the chart below, internal staff utilized the flexibility built into the investment policy to strategically overweight or underweight certain asset classes throughout the year. Strategic decisions within the Public Risk Assets program included an overweight to U.S. Equities and Non-U.S. Equities and within the Safe Assets program an overweight to Cash Equivalents and an underweight to U.S. Treasuries, all of which provided meaningful returns to the Systems in fiscal year 2024.

As discussed in the Investment Policy Summary: Asset Allocation section the use of total plan leverage is allowed to efficiently implement portfolio rebalancing. The Systems did not utilize total plan leverage during fiscal year 2024.



* *Total Plan assets include 0.1% invested in an operating cash account that is not reflected in the chart above.*

Public Risk Assets Summary

As of June 30, 2024, Public Risk Assets had a fair value of approximately $30.8 billion, representing 52.4% of total plan assets.

Investment Program Description

The Board of Trustees has adopted an asset allocation policy that includes a significant allocation to Public Risk Assets. The four programs within the Public Risk Assets composite are U.S. Public Equity, Public Credit, Hedged Assets and Non-U.S. Public Equity. The Public Credit allocation was decreased to zero as part of the 2020 Asset/ Liability Study. Each program within the Public Risk allocation is a separate multi-manager composite that is treated generally as a single portfolio. Each program serves a specific and distinct role within the overall Public Risk composite and also within the overall total plan allocation. Over time, the Public Risk composite and its sub-components serve as an effective and efficient vehicle to supply the underlying beta exposure to a portfolio of global risk assets required by the Systems' asset allocation policy, while providing the opportunity to achieve excess returns above that of a passive benchmark through the prudent combination of passive investment vehicles and a wide range of active investment strategies.

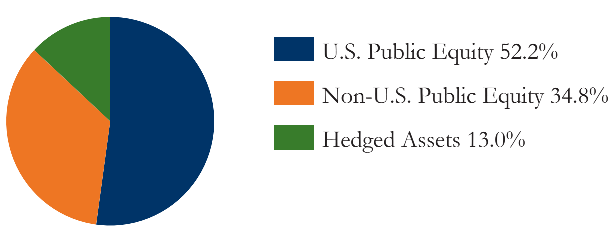
Structure

The Systems' allocation to Public Risk Assets at the end the fiscal year 2024 was 52.4% compared to the interim target allocation of 46%. The internal staff strategically increased the total plan's allocation to Public Risk Assets throughout the year from an allocation of 51.1% at the beginning of the year.

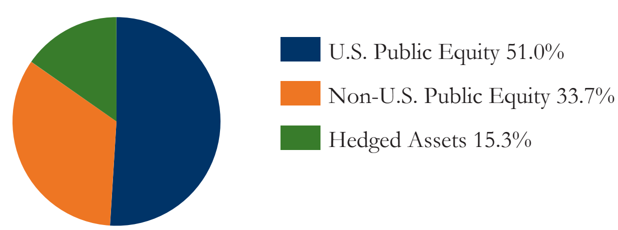
As of June 30, 2024, the Systems' Public Risk actual allocation was 51.0% in the U.S. Public Equity program, 33.7% in the Non-U.S. Public Equity program and 15.3% in the Hedged Assets program. Each of these programs is discussed in more detail on the following pages.

Public Risk Assets Allocation

Public Risk: Interim Target Allocation



Public Risk: Actual Allocation



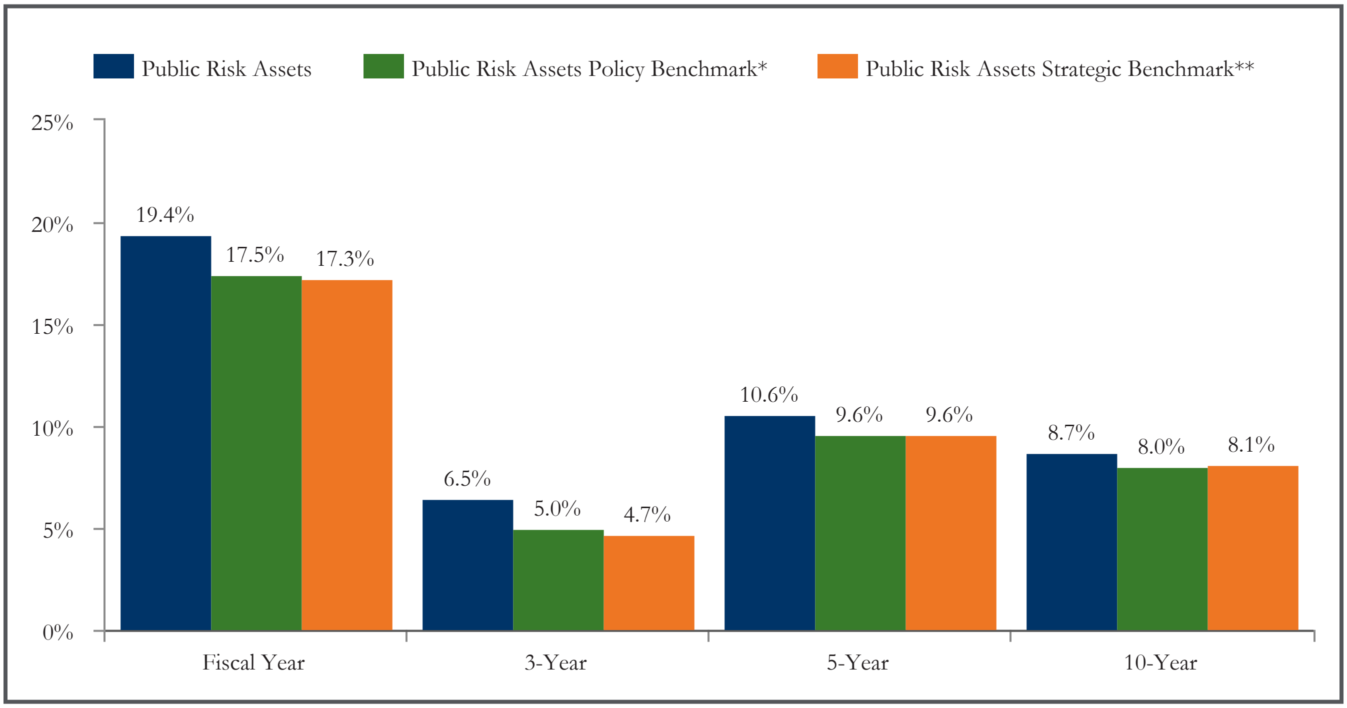
Market Overview

Fiscal year 2024 demonstrated an upward trajectory for the financial markets, fueled by increasing economic growth and further stability across the banking sector, central bank rates, and inflation. Driven by the improving market environment, the Russell 3000 Index (broad measure of the U.S. stock market) produced a 23.1% return for the year. The performance of Non-U.S. equity markets also proved to be strong, though not as robust as the U.S. equity markets, with the MSCI ACWI ex-USA Index (broad measure of the international stock markets) increasing 11.6% for the year. Bond markets continued to experience significant shifts in volatility, largely influenced by anticipated central bank monetary policies and other macro-economic factors. However, corporate credit markets managed to produce a moderate gain with the Bloomberg U.S. Intermediate Credit Index increasing 5.6%.

Performance

The Systems' Public Risk portfolio produced very strong absolute and relative returns for fiscal year 2024 with a total return of 19.4%, outperforming the policy benchmark return by 190 basis points. As shown in the table and graph below, the Systems' Public Risk composite has performed very well over long periods of time, providing meaningful absolute returns and 70 basis points of annualized excess return over the last ten years. The positive performance of the portfolio relative to the policy benchmark indicates value added by the internal staff through both strategic asset allocation decisions and manager selection decisions.

Public Risk Assets Performance



Public Risk Assets Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Return	19.4%	6.5%	10.6%	8.7%
Annualized Policy Benchmark Return*	17.5%	5.0%	9.6%	8.0%
Annualized Strategic Benchmark Return**	17.3%	4.7%	9.6%	8.1%
Excess Return	1.9%	1.5%	1.0%	0.7%
Annualized Standard Deviation of Composite	11.1%	13.2%	14.3%	11.8%
Annualized Standard Deviation of Policy Benchmark*	13.9%	15.5%	15.5%	12.6%
Beta to Policy Benchmark*	0.79	0.85	0.92	0.93
Beta to MSCI ACWI net Index	0.77	0.78	0.82	0.79

* *The Public Risk Assets Policy Benchmark is composed as follows: 55.4% Russell 3000 Index, 38.1% MSCI ACWI ex-USA net Index and 6.5% Bloomberg U.S. Intermediate Credit Index.*

** *The Public Risk Assets Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.*

U.S. Public Equity Program Summary

As of June 30, 2024, the U.S. Public Equity program had a fair value of approximately $15.7 billion, representing 26.7% of total plan assets.

Investment Program Description

U.S. Public Equity is comprised of the Large-Cap, Small-Cap and Alpha Overlay programs which seek to provide long-term capital appreciation and dividend income in excess of inflation through the investment in domestic equity securities. Returns above a purely passive investment benchmark are targeted through the use of a wide variety of active investment strategies that may employ exposure to both equity securities and other types of investments. The primary ***beta*** exposure is achieved through investments in passive investment vehicles (including derivatives), traditional long-only active domestic equity management, and active long/short approaches. ***Alpha*** (or, excess returns above a passive alternative) is expected to be achieved through traditional long-only active domestic equity management, active long/short approaches and alpha overlay strategies (described in greater detail at the end of this section).

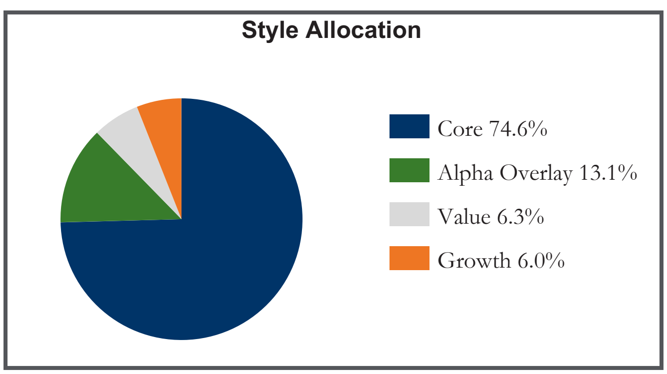
Structure

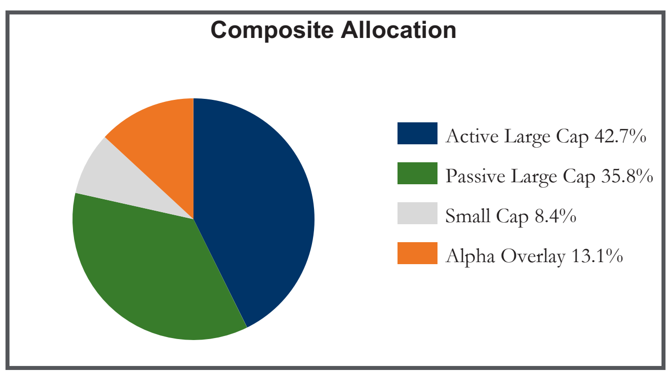
As of June 30, 2024, 35.8% of the U.S. Public Equity Large-Cap program was passively managed. An additional 6.1% of the composite was passively managed in the Small-Cap and the Alpha Overlay programs. The remainder of the portfolio was actively managed and diversified across a broad array of capitalization ranges and investment styles, including the Small-Cap and the Alpha Overlay programs. Both programs represent multi-manager pools of assets managed within the overall U.S. Public Equity structure. The Small-Cap program encompasses small capitalization assets. The Alpha Overlay composite focuses on the separation of returns into alpha and beta, and encompasses alternative equity mandates including hedge fund portfolios.

Exposure to the various segments of the domestic equity market (i.e., growth-oriented, value-oriented, and core) and to the approved investment strategy types are achieved through the identification, selection and on-going management of investment advisors qualified to serve as fiduciaries to the Systems.

The pie charts below depict the U.S. Public Equity portfolio by presenting the style structure of the portfolio as well as the composite allocation as of June 30, 2024.

U.S. Public Equity Allocations: Style and Composite





Market Overview

The U.S. equity markets continued to perform very well for fiscal year 2024, building on a notable recovery in fiscal year 2023. Throughout the year, large-cap stocks outpaced small-cap stocks while large-cap growth investment strategies outperformed value strategies. The comprehensive measure of the U.S. stock market (Russell 3000 Index) increased 23.1% while large-cap stocks (Russell 1000 Index) increased 23.9% and small-cap stocks (Russell 2000

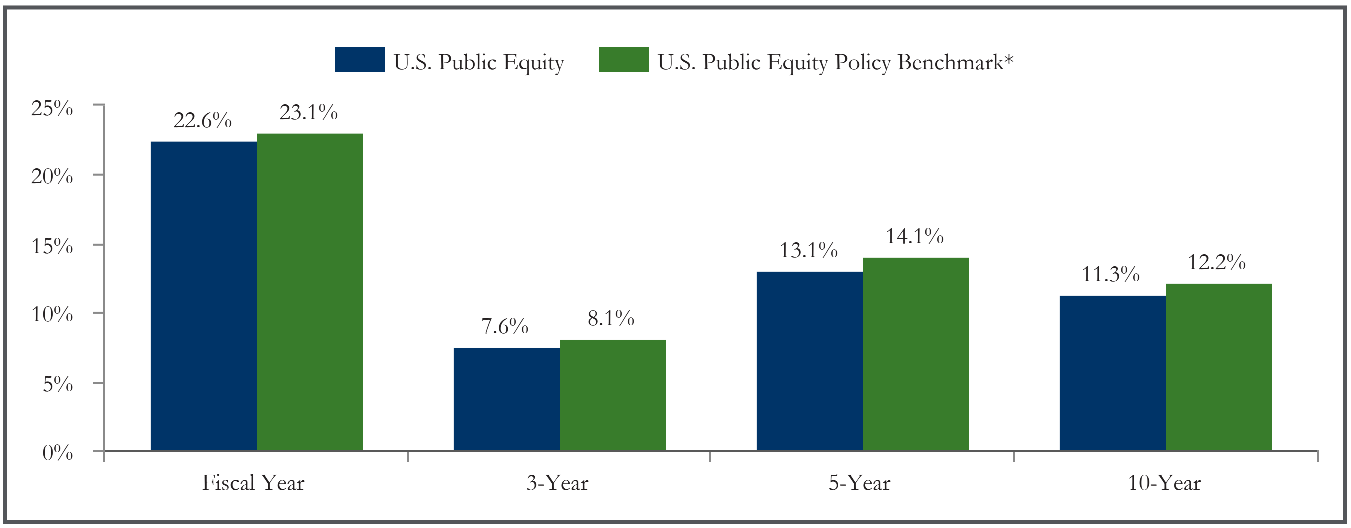
Index) increased 10.1% for the year. Large-cap growth stocks (Russell 1000 Growth Index) outperformed large-cap value stocks (Russell 1000 Value Index) with a return of 33.5% compared to 13.1% while small-cap value stocks (Russell 2000 Value Index) outperformed small-cap growth stocks (Russell 2000 Growth Index) with a return of 10.9% compared to 9.1%.

Performance

The total return for the U.S. Public Equity program was 22.6% compared to the benchmark return of 23.1% for the fiscal year ended June 30, 2024. Within the U.S. Public Equity program, the Large-Cap program returned 23.4%, Alpha Overlay returned 25.1% and the Small-Cap program returned 12.2% for the year. The Small-Cap program exceeded its policy benchmark (Russell 2000 Index) return by 210 basis points.

As indicated in the table and graph, the U.S. Public Equity portfolio has consistently produced significant absolute returns. The U.S. Public Equity portfolio has underperformed relative to the policy benchmark due to a lower risk profile than the market from a tactical allocation to low volatility equity strategies for enhanced downside protection. Over long periods of time, the Systems' U.S. Public Equity portfolio is designed to deliver approximately 50-100 basis points of excess return through a combination of active and passive investment strategies.

U.S. Public Equity Performance



U.S. Public Equity Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
U.S. Public Equity Return	22.6%	7.6%	13.1%	11.3%
Annualized Policy Benchmark Return*	23.1%	8.1%	14.1%	12.2%
Excess Return	-0.5%	-0.5%	-1.0%	-0.9%

* *The U.S. Public Equity Policy Benchmark is the Russell 3000 Index.*

Statistics

The following table displays the statistical characteristics of the Systems' U.S. Public Equity program as of June 30, 2024 with comparisons to the portfolio's policy benchmark. In addition, the top ten U.S. Public Equity holdings as of June 30, 2024 are shown in the table following the characteristics.

U.S. Public Equity Characteristics

Characteristics	June 30, 2024 Systems' U.S. Public Equity Program*	June 30, 2024 Russell 3000 Index
Number of Securities	1,791	2,925
Dividend Yield	1.4%	1.3%
Price-to-Earnings Ratio	24.4	25.0
Avg. Market Capitalization	$634.5 bil	$897.5 bil
Price-to-Book Ratio	4.5	4.4

U.S. Public Equity Top 10 Holdings

Top 10 Largest Holdings* June 30, 2024	Fair Value	% of Total U.S. Public Equity
Microsoft Corp.	$ 228,995,279	1.5%
Apple Inc.	211,461,427	1.3%
Nvidia Corp.	206,862,541	1.3%
Amazon.com Inc.	201,472,594	1.3%
Meta Platforms Inc.	170,308,373	1.1%
Alphabet Inc.	169,325,094	1.1%
Eli Lilly & Co.	88,405,830	0.6%
United Health Group Inc.	85,252,161	0.5%
Walmart Inc.	76,659,028	0.5%
Johnson & Johnson	70,869,476	0.4%
TOTAL	**$ 1,509,611,803**	**9.6%**

* *Includes only actively managed separate accounts.*

A complete list of portfolio holdings is available upon request.

Investment Advisors

As of June 30, 2024, the Systems had contracts with 16 external investment advisors who managed 19 portfolios that comprised 86.9% of the U.S. Public Equity portfolio. The remaining 13.1% of the portfolio was in the Alpha Overlay program described in the next section. The Systems repositioned the Large-Cap program during the year by terminating a mandate with NISA Investment Advisors and Select Equity Group while adding a new mandate with Jacobs Levy.

U.S. Public Equity Investment Advisors

Investment Advisor	Investment Style	Fair Value As of June 30, 2024	% of Total Plan Fair Value
Allspring Global Investments	Quantitative Low Volatility	$ 756,988,658	1.3%
AQR Capital Management	Quantitative 140/40 Core	1,174,889,421	2.0%
BlackRock	Passive Russell 1000 Index	5,625,328,042	9.6%
Coatue Long Only Partners	Concentrated Technology	502,718,235	0.9%
Coho Partners	Concentrated High Quality	128,554	—%
Eagle Capital Management	Concentrated Core	410,482,329	0.7%
GQG Partners	Concentrated High Quality	580,344,352	1.0%
Grantham, Mayo, Van Otterloo & Co.	Concentrated High Quality	1,065,095,312	1.8%
Jacobs Levy	Quantitative 130/30 Core	313,338,096	0.5%
Martingale Asset Management	Quantitative Low Volatility	632,069,531	1.1%
Russell Investments	Completion Portfolio	205,934,097	0.4%
Westwood Management	Concentrated Value	624,272,340	1.0%
Zevenbergen Capital	Concentrated All-Cap Growth	436,356,572	0.7%
Large-Cap Subtotal		**12,327,945,539**	**21.0%**
AQR Capital Management	Quantitative Core	164,983,578	0.3%
BlackRock	Passive Russell 2000 Index	424,382,571	0.7%
Greenhouse Funds	Concentrated Core	161,844,258	0.3%
Martingale Asset Management	Quantitative Low Volatility	167,840,414	0.3%
RK Capital Management	Diversified Core	206,715,331	0.3%
Systematic Financial Management	Diversified Value	194,781,503	0.3%
Small-Cap Subtotal		**1,320,547,655**	**2.2%**
Total		**$ 13,648,493,194**	**23.2%**

Alpha Overlay Program Summary

As of June 30, 2024, the Alpha Overlay program had a fair value of approximately $2.1 billion, representing 3.5% of total plan assets.

Investment Program Description

The Alpha Overlay portfolio resides within the U.S. Large-Cap Equity program. The Alpha Overlay portfolio has been constructed to assist in meeting the long-term goals established for the overall U.S. Large-Cap Equity allocation. Specifically, Alpha Overlay provides broad exposure to large-cap U.S. stocks using S&P 500 total return swaps, while the returns of a select portfolio of hedge fund strategies provide the opportunity to earn excess returns above the passive S&P 500 Index. By combining the market exposure obtained through the S&P 500 total return swaps with the diversified exposures to investment strategies focused on alpha generation, the combined portfolio is constructed and managed to produce a return stream with volatility and beta characteristics similar to the passive S&P 500 Index, while generating excess returns (or alpha) of approximately 200-250 basis points over longer periods of time.

Structure

As of June 30, 2024, 26.1% of the Alpha Overlay composite assets were passively managed by NISA Investment Advisors using S&P 500 total return swaps to attain equitization. An additional 67.5% of the portfolio was actively managed across a diversified range of multi-strategy and market neutral hedge fund mandates. The remaining 6.4% of the portfolio was actively managed by Zevenbergen Capital in a long-only mandate. The chart below displays the specific investment advisor exposure within the composite as of June 30, 2024.

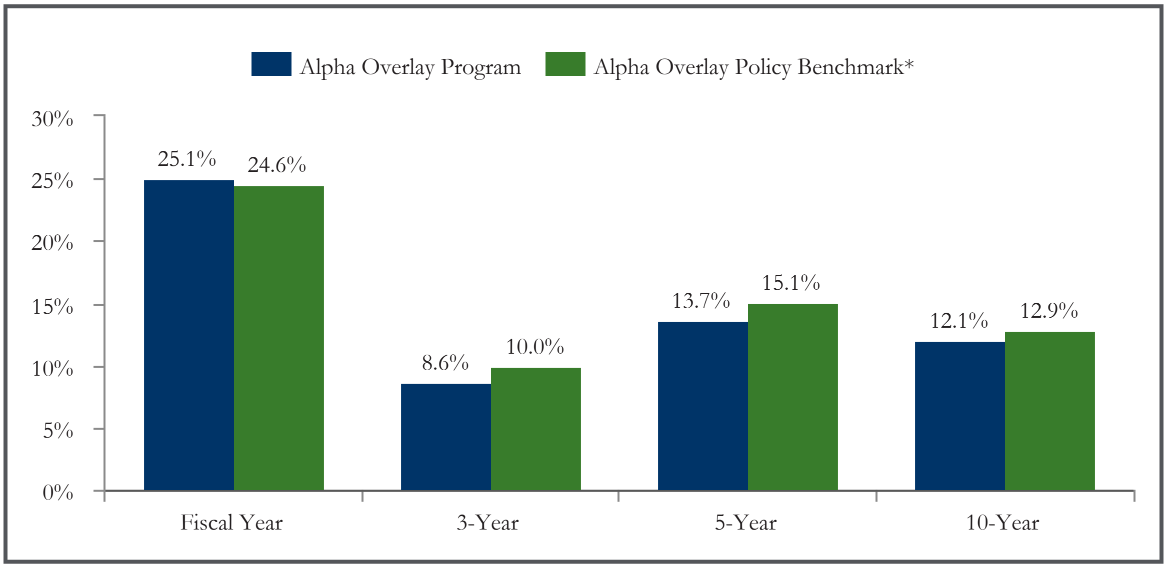
Alpha Overlay Investment Advisors

Investment Advisor	Investment Style		Fair Value As of June 30, 2024	% of Total Plan Fair Value
AQR Absolute Return Fund	Relative Value	$	140,606,385	0.2%
Bridgewater Pure Alpha II	Global Macro/Global Allocation		141,848,410	0.2%
Davidson Kempner Institutional Partners	Multi-Strategy Event-Driven		259,069,295	0.5%
HBK Capital Management	Relative Value		141,307,867	0.2%
NISA Investment Advisors	S&P 500 Exposure		535,385,026	0.9%
One William Street Capital Partners	Credit/Distressed		60,752,207	0.1%
Renaissance Institutional Equities Fund	Low Volatility Equity		207,187,411	0.4%
Rock Springs Capital Fund	Long-Biased Equity		48,203,341	0.1%
Sculptor Domestic Partners	Multi-Strategy Event-Driven		242,188,881	0.4%
Stark Investments Limited Partners	Equity Long/Short		41,141	0.0%
Tenor Opportunities Fund	Relative Value		142,546,997	0.3%
Zevenbergen Capital	Active All-Cap Growth		129,817,791	0.2%
Total		**$**	**2,048,954,752**	**3.5%**

Performance

The fiscal year 2024 return for the Alpha Overlay program was 25.1%, outperforming the benchmark return of 24.6% by 50 basis points. As shown in the table and graph below, the Alpha Overlay composite has produced significant long-term absolute returns while maintaining a risk profile (standard deviation and beta) lower than the benchmark.

Alpha Overlay Performance



Alpha Overlay Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Alpha Overlay Return	25.1%	8.6%	13.7%	12.1%
Annualized Policy Benchmark Return*	24.6%	10.0%	15.1%	12.9%
Excess Return	0.5%	-1.4%	-1.4%	-0.8%
Annualized Standard Deviation of Composite	11.8%	14.7%	16.7%	13.8%
Annualized Standard Deviation of Policy Benchmark*	14.6%	17.9%	18.1%	15.3%
Beta to Benchmark*	0.80	0.80	0.90	0.88

* *The Alpha Overlay Policy Benchmark is the S&P 500 Index.*

Non-U.S. Public Equity Program Summary

As of June 30, 2024, the Non-U.S. Public Equity program had a fair value of approximately $10.4 billion, representing 17.7% of total plan assets.

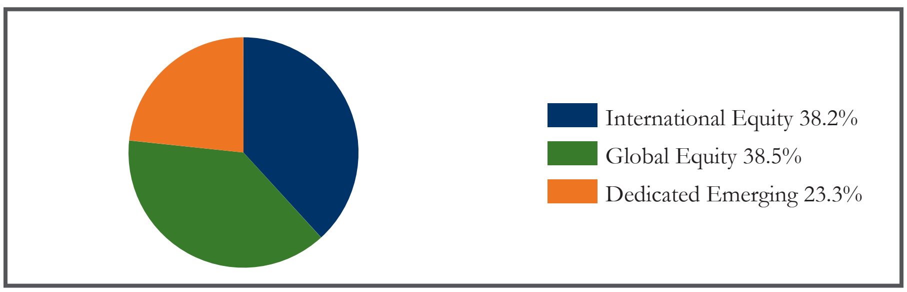
Investment Program Description

The Non-U.S. Public Equity program provides long-term capital appreciation and dividend income in excess of inflation through exposure to public equity securities on a global basis. Specific investment strategies approved for the Non-U.S. Public Equity program include passive investment vehicles, traditional long-only active equity management and active long/short approaches. Exposure to the various segments of the global equity market (i.e., U.S., developed non-U.S., emerging, growth-oriented, value-oriented, and core) and to the approved investment strategy types are achieved through the identification, selection and on-going management of investment advisors qualified to serve as fiduciaries to the Systems. The Non-U.S. Public Equity portfolios provide an element of diversification relative to the domestic equity portfolios. Currency is an aspect of international investing that can impact the performance and volatility of the asset class over the short-term. However, over the long-term, the effect from currency is expected to be neutral.

Structure

As of June 30, 2024, 10.4% of the Non-U.S. Public Equity composite was passively managed. The remainder of the portfolio was actively managed and diversified across capitalization ranges, styles and a number of developed and emerging market countries. The pie chart below indicates broad exposure by investment mandate within the composite.

Non U.S. Public Equity Allocation



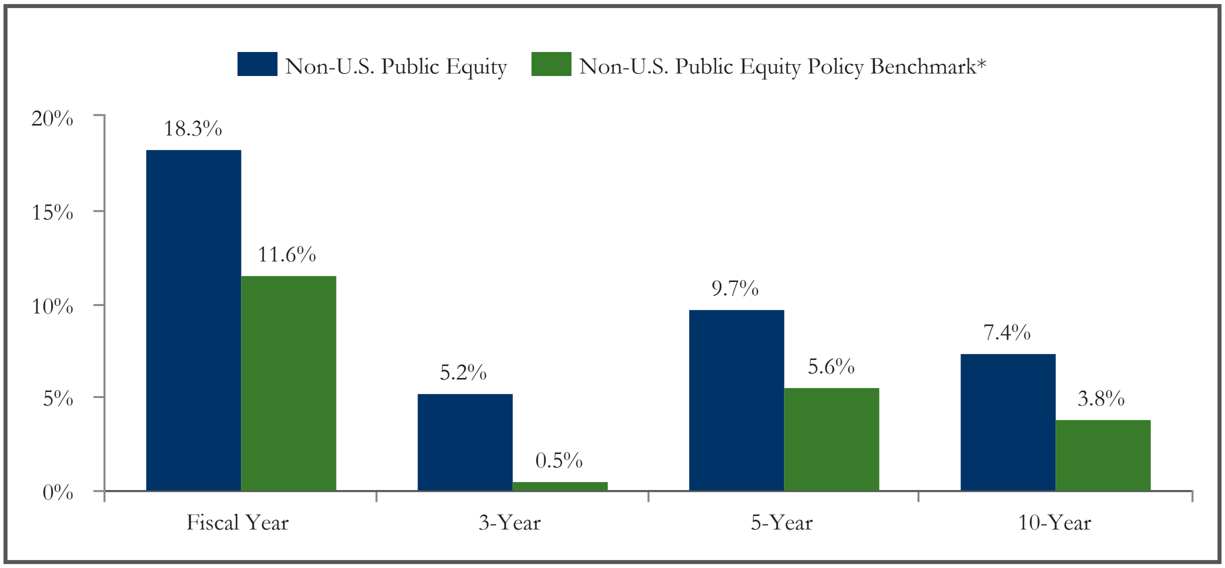
Market Overview

Stock markets throughout the world continued to produce meaningful returns in fiscal year 2024. While driven by the U.S. equity markets and improving macro-economic factors, the momentum of global equity markets slowed from their rebound in calendar year 2023 yet still delivered strong performance. In fiscal year 2024, the MSCI World net Index, which includes all global stocks, recorded a return of 20.2% while the MSCI World Ex-USA net Index returned 11.2%. Emerging markets, as represented by the MSCI EM net Index returned 12.6% outperforming international stocks (MSCI EAFE net Index) which rose by 11.5%, while the broad measure of the non-U.S. equity markets (MSCI ACWI ex-USA net Index) increased by 11.6%.

Performance

The Non-U.S. Public Equity program has consistently produced excellent relative returns and very strong absolute returns. The program generated a total return of 18.3% for fiscal year 2024, outperforming the policy benchmark of 11.6% by 670 basis points. As shown in the table and graph below, the Systems' Non-U.S. Public Equity composite has substantially outperformed the benchmark over all time periods. Over long periods of time, the Systems' Non-U.S. Public Equity program is designed to deliver approximately 100-150 basis points of excess returns through a combination of active and passive investment strategies. The Non-U.S. Public Equity program's returns have exceeded these expectations.

Non U.S. Public Equity Performance



Non U.S. Public Equity Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Non-U.S. Public Equity Return	18.3%	5.2%	9.7%	7.4%
Annualized Policy Benchmark Return*	11.6%	0.5%	5.6%	3.8%
Excess Return	6.7%	4.7%	4.1%	3.6%

* *The Non-U.S. Public Equity Benchmark is the MSCI ACWI ex-USA net Index.*

Statistics

The following table displays the top ten Non-U.S. Public Equity holdings as of June 30, 2024.

Non U.S. Public Equity Top 10 Holdings		
Top 10 Largest Holdings* June 30, 2024	**Fair Value**	**% of Total Non-U.S. Public Equity**
Novo Nordisk A/S	$ 120,473,863	1.2%
Taiwan Semiconductor Mfg Co.	103,112,457	1.0%
ASML Holding NV	100,164,622	1.0%
SAP SE	87,843,687	0.8%
Schneider Electric SE	81,676,345	0.8%
Compass Group PLC	73,960,627	0.7%
Experion PLC	69,295,351	0.7%
Novartis AG	67,327,990	0.7%
Air Liquide SA	67,205,660	0.6%
Nestle SA	65,970,115	0.6%
Total	**$ 837,030,717**	**8.1%**

* *Includes only actively managed separate accounts.*

A complete list of portfolio holdings is available upon request.

Investment Advisors

As of June 30, 2024, the Systems had contracts with 14 external investment advisors who managed 19 portfolios within the Non-U.S. Public Equity portfolio.

Non U.S. Public Equity Investment Advisors			
Investment Advisor	**Investment Style**	**Fair Value As of June 30, 2024**	**% of Total Plan Fair Value**
ABS Investment Management	Local Emerging Markets	$ 467,939,186	0.8%
Acadian Asset Management	Quantitative Emerging Markets Low Volatility	534,234,822	0.9%
Acadian Asset Management	Quantitative International Small Cap	209,963,329	0.4%
AllianceBernstein L.P.	Global Low Volatility	709,787,793	1.2%
Allspring Global Investments	Quantitative Global Low Volatility	408,304,098	0.7%
AQR Capital Management	Quantitative International Core	763,904,702	1.3%
Arrowstreet Capital	Quantitative Emerging Markets	597,973,441	1.0%
Arrowstreet Capital	Quantitative Global Long/Short	2,009,218,430	3.4%
BlackRock	Passive EAFE Index	403,320,236	0.7%
BlackRock	Passive Emerging Markets Index	268,947,092	0.5%
BlackRock	Passive World Index	406,109,232	0.7%
Coronation Asset Management Limited	Global Emerging Markets	279,974,258	0.5%
GQG Partners	Global Core	453,790,544	0.8%
Invesco Advisers	Quantitative International Low Volatility	269,271,774	0.5%
MFS Investment Management	Diversified International Core	1,268,278,206	2.1%
MFS Investment Management	Concentrated International Core	520,616,855	0.9%
Neon Capital Management	Emerging Markets Small Cap	1,764,144	—%
Rock Creek Group	Local Emerging Markets	265,717,319	0.4%
Walter Scott & Partners	International Core	524,143,341	0.9%
Total		**$ 10,363,258,802**	**17.7%**

Hedged Assets Program Summary

As of June 30, 2024, the Hedged Assets program had a fair value of approximately $4.7 billion, representing 8.0% of total plan assets.

Investment Program Description

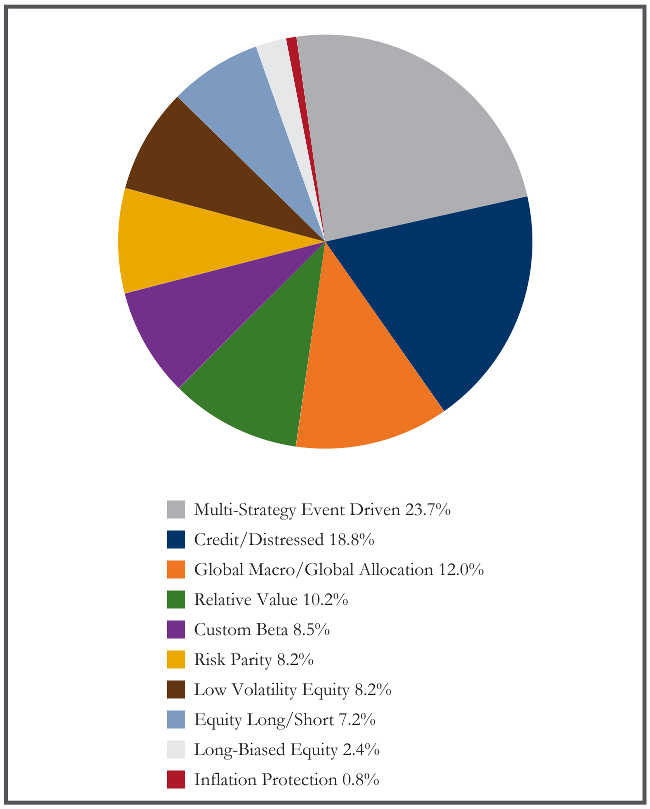
The Hedged Assets program's objective is to provide diversification to the total portfolio and reduce volatility within the Public Risk composite. The purpose of this program is to enhance the overall risk/return profile of the Public Risk composite through the inclusion of specialized investment strategies that typically generate returns in a different fashion (i.e., absent a high correlation to equities or bonds). These strategies may utilize leverage as allowed within their governing documents. The returns from these strategies have historically had a low-to-moderate correlation with the traditional equity markets, thus providing diversification benefits in addition to portfolio return enhancement. These strategies seek to control risks and maintain a focus on absolute returns. The inherent nature of these vehicles to serve as a "hedge" provides for the expectation that the program will lag the equity market during times when equities are performing above the long-term averages. However, when equities are performing below the long-term averages, the program would be expected to outperform the equity market. In addition, managers within this asset class have historically possessed significantly lower volatility relative to traditional equity managers.

Structure

The Systems have retained Albourne America, LLC (Albourne) as its hedged asset consultant. Albourne is an independent global advisory firm with a significant focus on hedge funds. The Systems utilize direct investments into hedge funds as opposed to incorporating fund-of-funds. The Systems' internal staff believes the benefits of direct investments, including lower fees, customized portfolio exposures, direct access to manager knowledge, and higher levels of transparency outweighed the benefit of quicker implementation offered by fund-of-funds.

The following chart indicates the strategy diversification of the Hedged Assets program as of June 30, 2024. The Systems manage the Hedged Assets portfolio to a blended benchmark of 25% Russell 3000 Index, 25% MSCI ACWI ex-USA net Index, and 50% Bloomberg U.S. Intermediate Credit Index.

Hedged Assets Diversification

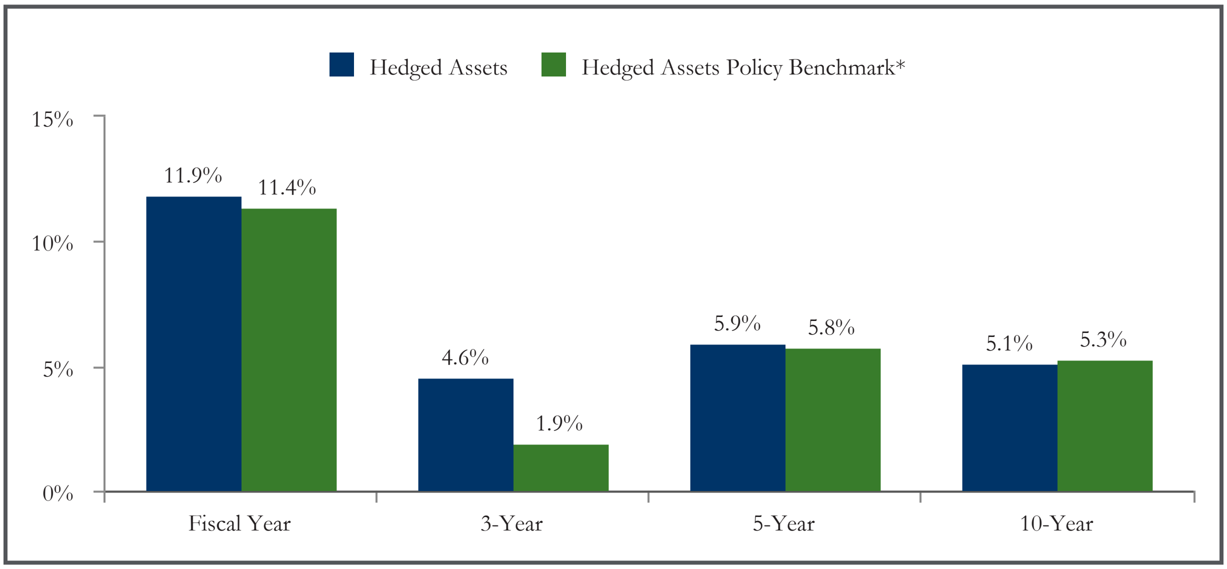


Performance

The total annualized return on the Systems' Hedged Assets portfolio was 11.9%, compared to the benchmark return of 11.4% for the fiscal year ended June 30, 2024.

Over the past ten years, the Hedged Assets program has underperformed its policy benchmark by 20 basis points. The performance relative to the policy benchmark is reasonable however, given the significant performance of equities over this time period. The Russell 3000 Index was up an annualized 12.2% over the past ten years and the MSCI ACWI net Index was up an annualized 8.4%. As discussed previously, the hedging characteristics of the Hedged Assets program provide for the expectation that its performance will lag equity markets and/or its policy benchmark during periods of higher-than-normal equity returns. The Hedged Assets program is expected to outperform in more normal and down markets. As the table indicates, the longer-term performance was accomplished by assuming less than one-half of the volatility of the MSCI ACWI net Index and achieving a beta of less than 0.30 to the index, signifying that the Systems' portfolio moves up or down less than half as much as the world stock index.

Hedged Assets Performance



Hedged Assets Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Hedged Assets Return	11.9%	4.6%	5.9%	5.1%
Annualized Policy Benchmark Return*	11.4%	1.9%	5.8%	5.3%
Excess Return	0.5%	2.7%	0.1%	-0.2%
Annualized Standard Deviation of Composite	2.7%	4.0%	6.8%	5.6%
Annualized Standard Deviation of Policy Benchmark*	9.5%	10.7%	10.8%	8.8%
Annualized Standard Deviation of MSCI ACWI net Index	14.3%	16.8%	17.4%	14.8%
Beta to Policy Benchmark*	0.06	0.21	0.46	0.48
Beta to MSCI ACWI net Index	0.05	0.14	0.29	0.29

* *The Hedged Assets Policy Benchmark is composed as follows: 50% Bloomberg U.S. Intermediate Credit Index, 25% MSCI ACWI ex-USA net Index and 25% Russell 3000 Index.*

Investment Advisors

As of June 30, 2024, the Systems had contracts with 17 external investment advisors who managed 23 portfolios. During the fiscal year two investment mandates were terminated while an investment mandate with One William Street Capital Partners was added to the program.

Hedged Assets Investment Advisors				
Investment Advisor	Investment Style		Fair Value As of June 30, 2024	% of Total Plan Fair Value
AQR Absolute Return Fund	Relative Value	$	261,126,144	0.4%
AQR Adaptive Multi-Strategy	Risk Parity		218,178,827	0.4%
AQR Global Risk Premium	Risk Parity		49,129,393	0.1%
AQR Real Asset Fund	Inflation Protection		3,038,918	0.0%
Bridgewater All Weather	Risk Parity		116,933,539	0.2%
Bridgewater Inflation Pool	Inflation Protection		34,704,471	0.1%
Bridgewater Pure Alpha II	Global Macro/Global Allocation		567,393,632	1.0%
Davidson Kempner Distressed Opportunities Fund	Credit/Distressed		276,439,253	0.5%
Davidson Kempner Institutional Partners	Multi-Strategy Event Driven		388,603,942	0.6%
Empyrean Capital Fund	Multi-Strategy Event Driven		275,549,283	0.5%
GoldenTree Partners	Credit/Distressed		566,919,231	1.0%
HBK Capital Management	Relative Value		141,307,867	0.2%
Hillhouse China Value Fund	Long-Biased Equity		81,175,164	0.1%
Maverick Fund USA	Equity Long/Short		407,897	0.0%
NISA Investment Advisors	Custom Dynamic Beta		402,379,363	0.7%
One William Street Capital Partners	Credit/Distressed		40,501,471	0.1%
Renaissance Institutional Equities Fund	Low Volatility Equity		384,776,620	0.6%
Rock Springs Capital Fund	Long-Biased Equity		32,135,561	0.1%
Sculptor Domestic Partners	Multi-Strategy Event Driven		449,779,351	0.7%
Southpoint Capital Advisors	Equity Long/Short		167,229,565	0.3%
Stark Investments Limited Partners	Equity Long/Short		76,404	0.0%
Tenor Opportunities Fund	Relative Value		76,756,075	0.1%
Viking Global Equities	Equity Long/Short		170,602,850	0.3%
Total		**$**	**4,705,144,821**	**8.0%**

Safe Assets Summary

As of June 30, 2024, Safe Assets had a fair value of approximately $8.9 billion, representing 15.1% of total plan assets.

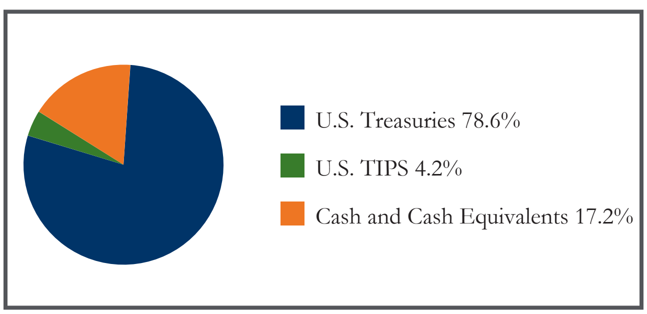
Investment Program Description

The Safe Assets program is intended to act as a source of safety and income for the Systems. The program is designed to create substantial diversification to the total fund and reduce volatility through low correlation to other asset classes. Specifically, the Safe Assets portfolio should provide asset protection at the total fund level in periods of economic stress.

Structure

As of June 30, 2024, NISA Investment Advisors was the only external investment manager within the Safe Assets program. Additionally, the Safe Assets program includes an FDIC insured interest-bearing account with a competitive yield at J.P. Morgan. The assets held within the program exhibit high liquidity and safety. The Systems' allocation to Safe Assets was unchanged from the prior year, remaining at 15.1% as of June 30, 2024. The pie chart below depicts the Safe Assets program by showing the composite allocations as of June 30, 2024.

Safe Assets Allocation



Market Overview

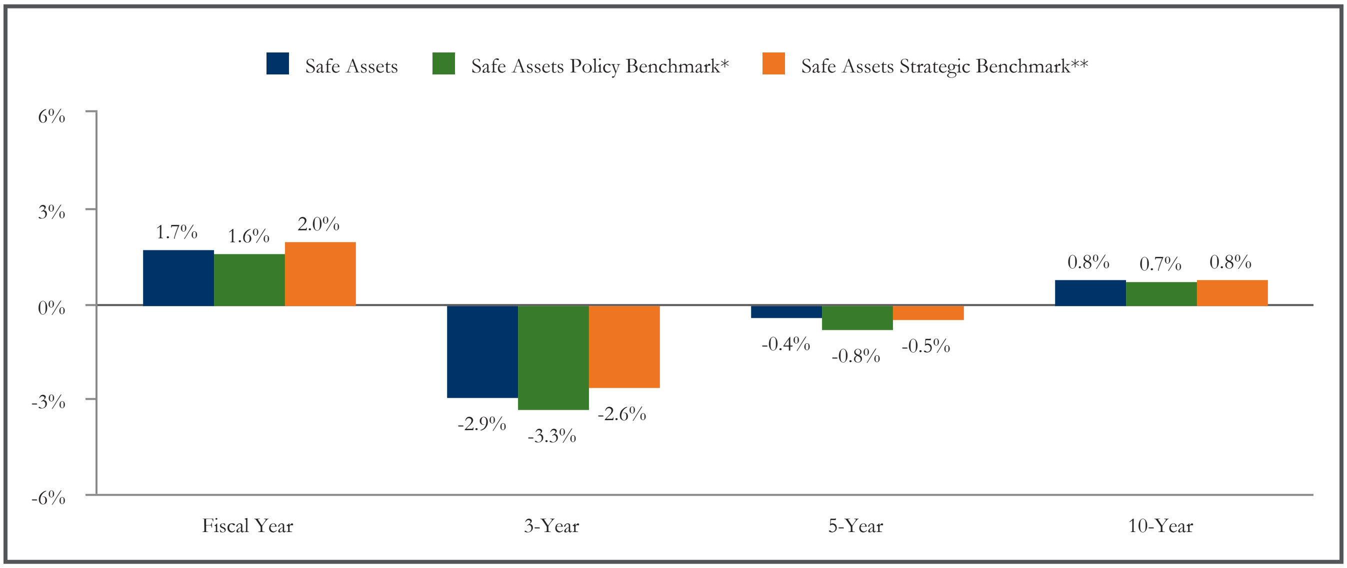
Treasury markets rebounded in fiscal year 2024 as the Federal Reserve eased the aggressive tightening policy implemented in late 2022 and throughout 2023. The yield on the 10-year Treasury rose from 3.81% in June 2023 to 4.36% in June 2024. The comprehensive measure of the U.S. Treasuries market (Bloomberg U.S. Treasuries Index) increased by 1.6% while the TIPS market (Bloomberg U.S. TIPS 1-10 Year Index) saw a rise of 4.3% for the year. Treasuries underperformed other fixed income markets during the year. High yield, or lower quality bonds (ICE BofA U.S. High Yield Index) increased 10.5%, investment grade credit corporate bonds (Bloomberg U.S. Intermediate Credit Index) increased 5.6%, and a broader measure of the U.S. bond market (Bloomberg U.S. Aggregate Index) increased by 2.6% for the year.

Performance

The total return for the Safe Assets portfolio was 1.7% compared to the benchmark return of 1.6% for the fiscal year ended June 30, 2024. The Systems' opportunistic allocation to U.S. TIPS and shorter duration cash and cash equivalents contributed to the 10 basis points of excess return achieved during the year.

The absolute return of the Safe Assets portfolio is relatively modest over longer time periods. However, the Safe Assets portfolio is designed to provide asset protection at the total fund level in periods of economic stress and ultimate liquidity to the Systems. An allocation to Safe Assets allows the Systems to accept market risk in other portions of the total fund portfolio.

Safe Assets Performance



Safe Assets Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Safe Assets Return	1.7%	-2.9%	-0.4%	0.8%
Annualized Policy Benchmark Return*	1.6%	-3.3%	-0.8%	0.7%
Annualized Strategic Benchmark Return**	2.0%	-2.6%	-0.5%	0.8%
Excess Return	0.1%	0.4%	0.4%	0.1%
Annualized Standard Deviation of Composite	6.6%	6.3%	5.6%	4.4%
Annualized Standard Deviation of Policy Benchmark*	6.7%	6.4%	5.7%	4.5%
Beta to Policy Benchmark*	0.99	0.98	0.98	0.96
Beta to MSCI ACWI net Index	0.37	0.25	0.11	0.06

* *Effective July 1, 2020 the Safe Assets Policy Benchmark is the Bloomberg U.S. Treasury Index. The 80.0% Bloomberg U.S. Treasury Index and 20.0% Bloomberg TIPS 1-10 Yrs. Index is used in prior periods.*

** *The Safe Assets Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.*

The Systems have specifically taken less risk compared to the policy benchmark due to the inclusion of the cash and cash equivalents portfolios. Additionally, the Safe Assets program had a beta slightly less than 1.0 relative to the policy benchmark indicating less market volatility. Most importantly, the Safe Assets portfolio exhibits a beta of approximately zero relative to the MSCI ACWI net Index over the ten-year time period, indicating no correlation to risk assets. These statistics support one of the primary objectives of Safe Assets: diversification from other risk assets in the total fund.

Statistics

The following table displays the statistical characteristics of the Systems' Safe Assets program as of June 30, 2024 with comparisons shown to the Bloomberg U.S. Treasury Index. Additionally, the top ten Safe Assets holdings as of June 30, 2024 are shown in the table below the characteristics.

Safe Assets Characteristics		
Characteristics	June 30, 2024 Systems' Safe Assets Program	June 30, 2024 Bloomberg U.S. Treasury Index
Number of Securities	162	288
Average Coupon	2.8%	2.8%
Yield to Maturity	4.6%	4.6%
Average Maturity (Years)	8.6	8.4
Duration (Years)	5.8	5.9

Safe Assets Top 10 Holdings			
Top 10 Largest Holdings* June 30, 2024		Fair Value	% of Total Safe Assets
United States Treasury Note, 1.875%, 02/28/2027	$	172,906,612	2.0%
United States Treasury Note, 1.625%, 11/15/2050		161,069,025	1.8%
United States Treasury Note, 2.75%, 08/15/2032		160,218,951	1.8%
United States Treasury Note, 0.25%, 08/31/2025		155,884,842	1.8%
United States Treasury Note, 3.75%, 06/30/2030		148,520,285	1.7%
United States Treasury Note, 2.375%, 05/15/2051		139,434,176	1.6%
United States Treasury Note, 4.625%, 02/28/2026		135,008,065	1.5%
United States Treasury Note, 1.25%, 09/30/2028		128,830,322	1.4%
United States Treasury Note, 1.25%, 09/30/2028		128,802,781	1.4%
United States Treasury Note, 0.75%, 08/31/2026		125,744,273	1.4%
Total	**$**	**1,456,419,332**	**16.4%**

* *A complete list of portfolio holdings is available upon request.*

Investment Advisors

NISA Investment Advisors was the only external investment advisor within the Safe Assets program, managing three portfolios as of June 30, 2024. The Safe Assets program also includes an interest-bearing cash account with the Systems' master custodian J.P. Morgan.

Safe Assets Investment Advisors				
Investment Advisor	Investment Style		Fair Value As of June 30, 2024	% of Total Plan Fair Value
NISA Investment Advisors	U.S. Treasuries	$	6,982,228,619	11.9%
NISA Investment Advisors	U.S. TIPS		373,826,133	0.6%
NISA Investment Advisors	Cash Equivalents		788,530,425	1.3%
J.P. Morgan	Interest Bearing Cash Account		738,699,114	1.3%
Total		**$**	**8,883,284,291**	**15.1%**

Private Risk Assets Summary

As of June 30, 2024, Private Risk Assets had a fair value of approximately $19.0 billion, representing 32.4% of total plan assets.

Investment Program Description

The allocation to Private Risk investments is viewed as a separate asset class for inclusion in the Systems' overall investment portfolios. The process of building the Systems' Private Risk program occurred over the past two decades and continuously evolved over that time. The program continues to evolve and grow as discussed on the following pages. Fully funding the most recent target allocation is expected to occur over a period of several years. Additional new investments will be necessary beyond the funding period in order to maintain the long-term target allocation. The three programs within the Private Risk Assets composite are Private Equity, Private Real Estate and Private Credit. Each program within the Private Risk allocation is a separate multi-manager composite that is treated generally as a single portfolio. Each program serves a specific and distinct role within the overall Private Risk composite and also within the overall total plan allocation. Over time, the Private Risk composite serves as a long-term vehicle to supply the underlying beta exposure to a portfolio of private assets.

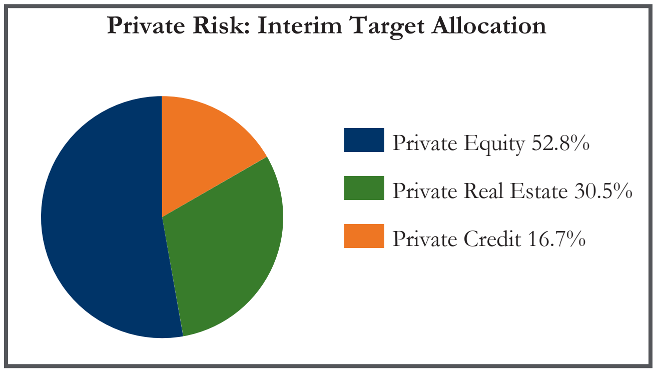
Investments in Private Risk Assets differ substantially from the Systems' public markets asset classes (Public Risk Assets and Safe Assets) in part because they are typically very long-term in nature, not publicly traded, relatively illiquid and offer the potential for substantially higher returns (along with a commensurate level of risk). The illiquid nature of Private Risk Assets can result from the form of the asset or security itself, or it can be a function of the investment structure being utilized (e.g., a limited partnership).

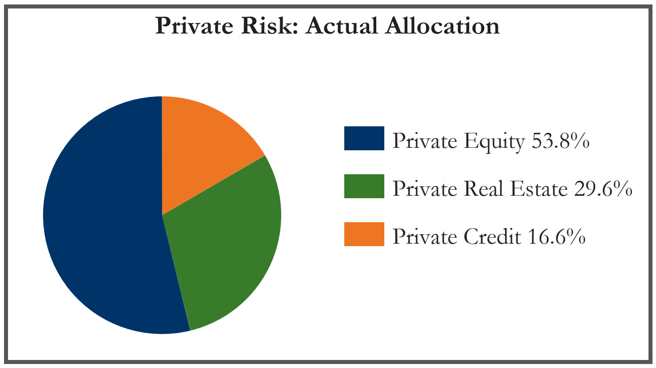
Due to the fact that Private Risk Assets are not publicly traded, pricing and performance measurements prior to the realization of gains are less reliable than in the traditional publicly traded asset classes. The Systems continually monitor the valuation policies and procedures utilized for such investments.

Structure

As of June 30, 2024, 53.8% of Private Risk Assets were invested in the Private Equity program, 29.6% in the Private Real Estate program and 16.6% in the Private Credit program. Each of these programs is discussed in more detail on the following pages.

Private Risk Assets Allocation

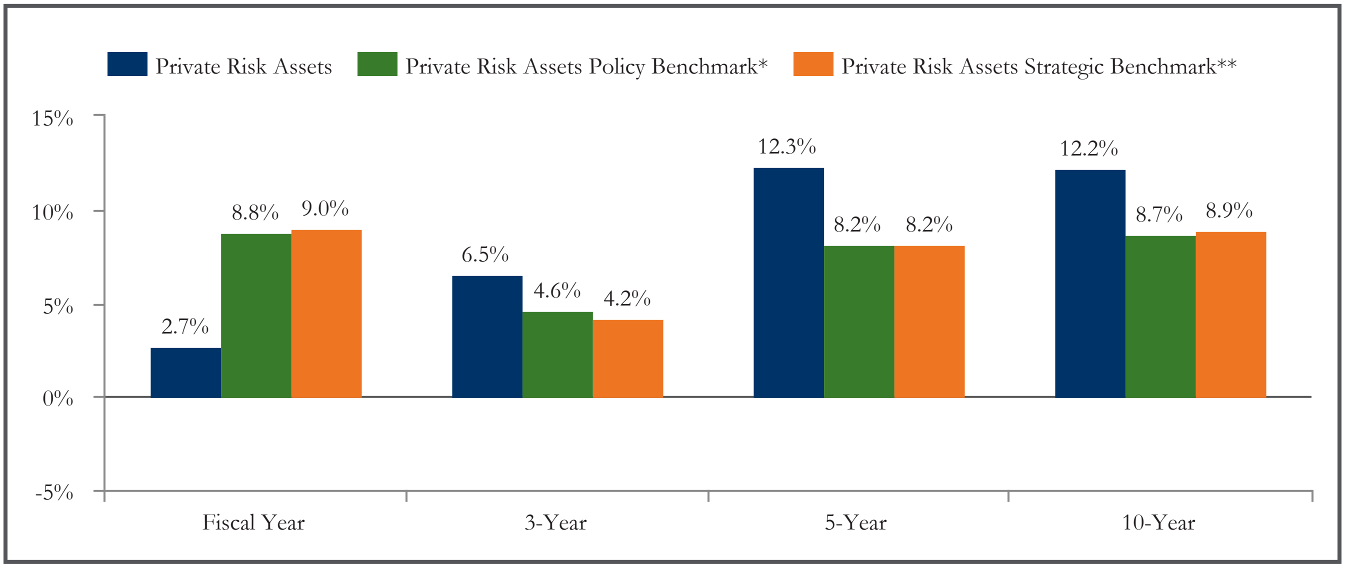




Performance

The total return for the Private Risk portfolio was 2.7% compared to the policy benchmark return of 8.8% for the fiscal year ended June 30, 2024. The pricing and performance methodology utilized for private assets can provide for significant performance variances over short time periods. For instance, the Systems utilize liquid benchmarks (e.g., Russell 3000 Index) to measure an illiquid (Private Equity) asset class. Thus, there will be significant performance differences over short time periods in volatile markets. Due to the long-term nature of Private Risk assets, the performance can be more appropriately judged over a longer timeframe. As the table below indicates, the Private Risk portfolio has produced very strong absolute and relative returns over the extended time periods. The ten-year return exceeded the benchmark by 350 basis points. These excess returns are net of fees and expenses.

Private Risk Assets Performance



Private Risk Assets Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Private Risk Assets Return	2.7%	6.5%	12.3%	12.2%
Annualized Policy Benchmark Return*	8.8%	4.6%	8.2%	8.7%
Annualized Strategic Benchmark Return**	9.0%	4.2%	8.2%	8.9%
Excess Return	-6.1%	1.9%	4.1%	3.5%

* *The Private Risk Assets Policy Benchmark is composed as follows: 39.6% Russell 3000 Index, 30.5% NFI-ODCE net Index, 13.2% MSCI ACWI ex-USA net Index and 16.7% ICE BofA U.S. High Yield Index.*

** *The Private Risk Assets Strategic Benchmark changes monthly based on the actual asset allocation at the end of the previous month.*

Private Equity Program Summary

As of June 30, 2024, the Private Equity program had a fair value of approximately $10.2 billion, representing 17.4% of total plan assets.

Investment Program Description

The Private Equity asset class is comprised of investment opportunities not typically included within the public equity and fixed income markets. Private Equity investments provide financing for start-up companies, private middle market companies, firms in financial distress and public and non-public firms seeking buyout financing. Private Equity investments can be classified into three basic sub-asset class categories:

- Venture Capital,
- Buyouts, and
- Debt-Related.

Investments in the sub-asset classes can be made in the U.S. or foreign countries. In total, the allocation to non-U.S. Private Equity investments will not exceed 50% of the overall Private Equity target allocation. The risks associated with Private Equity will be viewed both in isolation and within the context of the entire fund.

In January 2014, the Board of Trustees approved the development and implementation of a Private Equity Co-Investment program. The full implementation of the Co-Investment program has advanced the goals and objectives of the overall Private Equity program by obtaining additional exposure to underlying portfolio company investments through direct equity investments made on a side-by-side basis with private equity funds where the Systems have an existing relationship. In certain instances, exposure to the desired investments may be achieved through transactions executed in secondary markets. Co-Investments serve to increase exposure to the Private Equity asset class with little or no additional fees and/or performance carry paid to the underlying private equity partnerships. The objective of the Co-Investment program is to leverage existing, high-quality relationships with private equity managers in order to increase commitments to the asset class in a format that does not materially increase overall risk, while simultaneously helping to lower fees and performance carry.

Structure

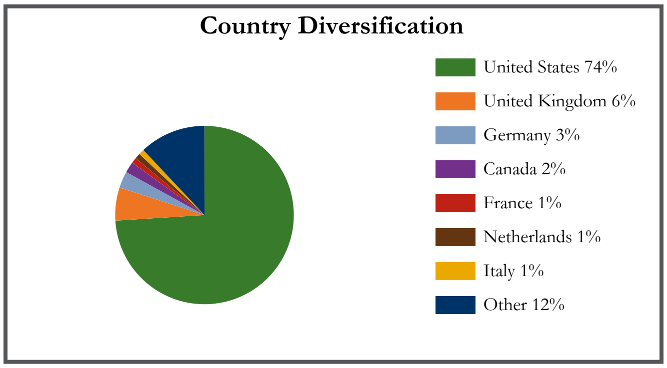
As of June 30, 2024, Private Equity assets committed* for investment were $15.9 billion. The fair value of funds that had been drawn down and actually invested as of June 30, 2024 was approximately $10.2 billion, representing 17.4% of total plan assets. The Systems' private equity investment commitments that have not yet been funded were approximately $4.1 billion as of June 30, 2024.

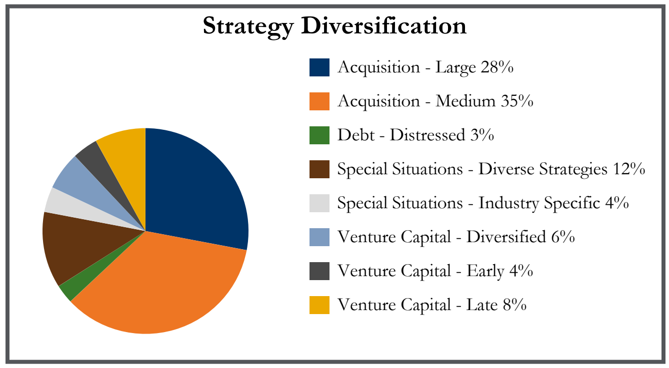
The objective of the Systems' allocation to Private Equity is to achieve returns that are higher than those attainable in the public equity markets with the added benefit of diversification. The long-term and illiquid nature of the Private Equity asset class dictates that capital must be invested at a measured pace. Pathway Capital Management has been retained by the Systems to provide private equity investment management services through three structures: a discretionary fund-of-funds relationship, an advisory relationship and a co-investment program. Additionally, the Systems have invested in private equity secondary funds and also utilize Albourne America, LLC to provide private equity advisory services.

The pie charts on the following page show the diversification (utilizing the fair value of invested assets) of the Systems' Private Equity holdings as of June 30, 2024 from both strategy and country perspectives.

** Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Fair value reflects capital that has actually been drawn and invested by the partnerships and funds.*

Private Equity Country and Strategy Diversification





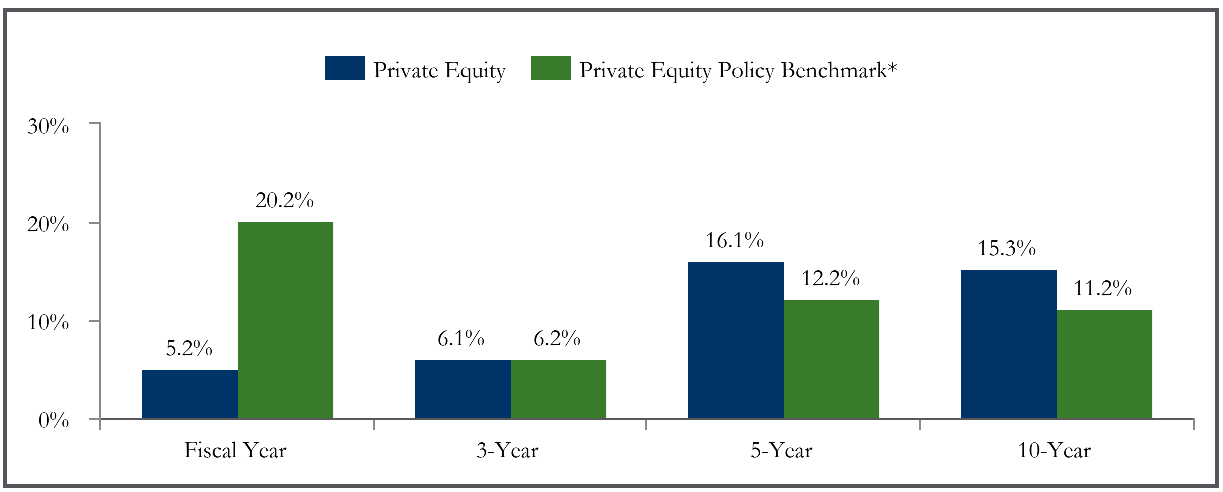
Market Overview

Private equity markets were not as robust as the public equity markets throughout fiscal year 2024. The private equity markets were more constrained during the year due to elevated interest rates and lingering economic uncertainty. For fiscal year 2024, the Systems' Private Equity program experienced moderate returns and strong distributions as many private equity firms capitalized on opportunities to sell their portfolio companies.

Performance

The total return for the Private Equity program was 5.2%, compared to the benchmark return of 20.2% for the fiscal year ended June 30, 2024. The Private Equity benchmark utilizes a blend of liquid public equity indices (e.g., Russell 3000 Index) to measure an illiquid (Private Equity) asset class. As such, there could be significant performance differences over short time periods in volatile markets. Due to the long-term nature of the asset class, the performance of a Private Equity portfolio can be more appropriately judged over a longer timeframe. As the table below indicates, the Private Equity portfolio has produced excellent absolute and relative returns over the extended time periods. The ten-year return exceeded the benchmark by 410 basis points. These excess returns are net of fees and expenses.

Private Equity Performance



Private Equity Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Private Equity Return	5.2%	6.1%	16.1%	15.3%
Annualized Policy Benchmark Return*	20.2%	6.2%	12.2%	11.2%
Excess Return	-15.0%	-0.1%	3.9%	4.1%

* *Effective October 1, 2019 the Private Equity Policy Benchmark is 75% Russell 3000 Index and 25% MSCI ACWI ex-USA net Index. The Russell 3000 Index is used for prior periods.*

Private Equity Partnerships

As of June 30, 2024, the Systems were invested in 254 separate partnerships with 83 firms within the Private Equity asset class. In fiscal year 2024, the Systems committed to 24 new partnerships for $614 million. Additionally, the Systems received total distributions from the private equity partnerships of approximately $1.1 billion in fiscal year 2024.

Private Equity Partnerships

Partnerships	Investment Strategy	Fair Value* As of June 30, 2024	% of Total Plan Fair Value
Advent International GPE VII, VIII, IX, X, Lat Am	Acquisition - Medium	$ 95,010,530	0.2%
Alchemy Special Opportunities Fund IV	Debt - Distressed	22,612,763	0.0%
Baring Asia Private Equity Fund VI	Acquisition - Medium	18,658,421	0.0%
Battery Ventures XII, XII Side, XIII, XIII Side, XIV, Select II	Venture Capital	47,861,588	0.1%
BC European Capital IX	Acquisition - Large	12,177,254	0.0%
Berkshire Fund X	Special Situations - Diverse Strategies	13,149,489	0.0%
Blackstone Capital Partners V, VI	Acquisition - Large	7,340,417	0.0%
Bregal Sagemount IV	Special Situations - Diverse Strategies	8,645,794	0.0%
Canaan Equity IX, X, XI, XII	Special Situations - Diverse Strategies	108,395,351	0.2%
Carlyle Europe Partners III	Acquisition - Medium	492,987	0.0%
Carlyle Partners V, VI	Acquisition - Large	12,277,091	0.0%
Centerbridge Capital Partners I, II, III, IV	Special Situations - Diverse Strategies	71,755,319	0.1%
Centerbridge Special Credit Partners II, III, III-Flex	Debt - Distressed	65,286,400	0.1%
Charlesbank Fund IX, IX Overage Allocation Program, X	Acquisition - Medium	39,532,738	0.1%
Chequers Capital XVII	Acquisition - Medium	8,984,169	0.0%
Clayton, Dubilier & Rice Fund X	Acquisition - Medium	36,920,825	0.1%
Clearlake Capital Partners V, VI, VII	Special Situations - Diverse Strategies	75,165,539	0.1%
Clearlake Opportunities Partners II, III	Debt - Opportunistic	12,809,936	0.0%
Coller International Partners VII, VIII	Secondary Fund	194,926,265	0.3%
CVC Capital Partners VI, VII, VIII	Acquisition - Large	104,105,483	0.2%
CVC European Equity Partners IV, V	Acquisition - Large	691,692	0.0%
DEFY Partners I, II	Venture Capital	15,391,193	0.0%
EnCap Energy Capital Fund IX, X, XI, XII, VIII Co-Investors	Special Situations - Industry Specific	101,860,116	0.2%
EnCap Flatrock Midstream III, IV	Special Situations - Industry Specific	14,635,793	0.0%
Energy Spectrum Partners VIII	Acquisition - Medium	69,034,751	0.1%
EQT VIII, IX, X	Acquisition - Medium	97,093,174	0.2%
Exponent Private Equity Partners II	Acquisition - Medium	407,217	0.0%
First Reserve Fund XI, XII	Special Situations - Industry Specific	27,101	0.0%
Francisco Partners VII	Special Situations - Industry Specific	600,000	0.0%
General Catalyst Group IX, X, XI, XII	Venture Capital	112,753,799	0.2%
Genstar Capital Partners V, VIII, IX, X, XI	Acquisition - Medium	71,777,174	0.1%
Glendon Opportunities Fund I, II	Debt - Distressed	20,703,560	0.0%
Great Hill Equity Partners VII, VIII	Special Situations - Diverse Strategies	42,386,480	0.1%
GTCR Fund XI, XII, XIII	Acquisition - Medium	84,229,130	0.1%
H.I.G. Capital Partners VI	Acquisition - Large	14,726,234	0.0%
H.I.G. Growth Buyouts & Equity Fund III, Mid Mkt LBO IV	Acquisition - Large	29,845,109	0.1%
Harvest Partners VIII, IX	Acquisition - Large	38,947,016	0.1%
Hellman & Friedman Capital Partners Spock 1, VII, VIII, IX, X	Acquisition - Large	145,005,611	0.3%
Hercules CV	Special Situations - Industry Specific	7,524,631	0.0%
Hillhouse Fund IV, V	Acquisition - Large	103,258,024	0.2%
Huron Fund V	Acquisition - Medium	15,602,536	0.0%
Icon Partners III, IV, V	Acquisition - Large	7,281,709	0.0%
Icon Software Partners	Special Situations - Diverse Strategies	8,334,854	0.0%
Incline Elevate Fund II	Acquisition - Small	2,725,029	0.0%
Incline Equity Partners V	Acquisition - Medium	6,199,963	0.0%
Insight Partners XII Buyout Annex Fund	Acquisition - Medium	6,438,836	0.0%
Insight Partners IX, X, XI, XII	Special Situations - Diverse Strategies	199,889,344	0.3%
Institutional Venture Partners XV, XVI, XVII	Venture Capital	80,148,742	0.1%
Kelso Investment Associates VIII	Acquisition - Medium	111,927	0.0%
KRG Capital Fund IV	Acquisition - Medium	825,120	0.0%
Lexington Capital Partners VI, VII, VIII, IX	Secondary Fund	449,803,735	0.8%
Lone Star Fund X	Debt - Distressed	52,072,209	0.1%
Madison Dearborn VI, VI Patriot, VII, VII Auxiliary SPV, VIII	Acquisition - Medium	111,339,288	0.2%
Marlin Equity V, Heritage II, Europe Heritage II	Acquisition - Medium	59,072,900	0.1%
Mayfair Equity Partners II, II Sidecar	Acquisition - Medium	43,807,162	0.1%
Montagu IV	Acquisition - Medium	1,740,288	0.0%
Nautic Partners IX, X	Acquisition - Medium	29,621,655	0.1%
New Enterprise Associates 13, 14, 15, 16, 17, 18, VGE 18	Venture Capital	174,542,323	0.3%

Private Equity Partnerships

Partnerships	Investment Strategy	Fair Value* As of June 30, 2024	% of Total Plan Fair Value
New Horizon: Advantech Capital II, Redview Capital II	Special Situations - Diverse Strategies	6,956,754	0.0%
New Mountain Partners V, VI	Acquisition - Medium	90,613,376	0.2%
Nordic Capital CV1 Alpha, VIII, IX, X, XI	Acquisition - Medium	86,440,881	0.2%
NorthEdge Capital SME Fund I	Acquisition - Medium	11,606,584	0.0%
Oak Investment Partners XIII	Venture Capital	17,718,916	0.0%
Oaktree Opportunities Fund IX, Xb	Debt - Distressed	37,798,844	0.1%
Odyssey Investment Partners Fund IV, V	Acquisition - Medium	27,947,128	0.1%
Onex Partners II, III, IV, V, ONCAP IV	Acquisition - Medium	71,867,451	0.1%
Pamlico Capital IV, V	Acquisition - Medium	45,903,504	0.1%
Pantheon Global Secondary Fund III, IV	Secondary Fund	6,005,775	0.0%
Pathway Capital Management	Fund-of-Funds	4,926,924,023	8.4%
Paul Capital Partners IX	Secondary Fund	2,592,847	0.0%
Permira Europe V, VI	Acquisition - Medium	110,716,771	0.2%
Permira VII, VIII	Acquisition - Large	26,159,260	0.0%
Providence Equity Partners VI, Strategic Growth IV, V	Special Situations - Industry Specific	69,715,442	0.1%
Quad-C Partners IX, X	Acquisition - Medium	55,163,457	0.1%
Quantum Energy Partners V, V-C, VI, VI-C, VII, VII-C, VIII, VIII-C	Special Situations - Industry Specific	57,428,756	0.1%
Ridgemont Equity Partners III, IV	Acquisition - Medium	55,516,169	0.1%
Riverside Micro-Cap Fund V, VI	Acquisition - Small	43,524,773	0.1%
Sentinel Capital Partners VI, VII	Acquisition - Small	18,216,480	0.0%
Sentinel Junior Capital I, II	Debt - Mezzanine	2,633,030	0.0%
Silver Lake Partners III, III SL SPV-2	Special Situations - Industry Specific	7,108,302	0.0%
Siris Partners IV	Acquisition - Medium	65,682,352	0.1%
Spectrum Equity Investors VI, VII, VIII, IX, X	Special Situations - Diverse Strategies	83,368,830	0.1%
Summit Partners Growth Equity Fund X, XI	Special Situations - Diverse Strategies	29,839,054	0.1%
Summit Partners Venture Capital Fund V-A	Special Situations - Diverse Strategies	11,631,356	0.0%
TA XI, XII, XIII, XIV	Special Situations - Diverse Strategies	98,197,829	0.2%
TCV VII, VIII, IX, X, XI, XII	Venture Capital	153,068,331	0.3%
The Resolute Fund III, IV, V, VI, II Continuation	Acquisition - Medium	117,594,537	0.2%
The Cinven Fund Seventh, Eight	Acquisition - Medium	50,333,217	0.1%
The Veritas Capital Fund VII, VIII	Acquisition - Medium	104,587,365	0.2%
Thoma Bravo Discover Fund I, II, III, IV	Acquisition - Medium	70,115,371	0.1%
Thoma Bravo Fund XII, XIII, XIV, XV	Acquisition - Large	127,565,940	0.2%
Thoma Bravo Special Opportunities Fund II	Acquisition - Medium	38,436,157	0.1%
TPG Partners V, VI	Acquisition - Large	405,792	0.0%
Trident Capital Fund VII, IX	Acquisition - Medium	92,355,980	0.2%
Vista Equity Partners Fund V, VI, VII, Foundation III, IV	Acquisition - Medium	190,361,090	0.3%
Wayzata Opportunities Fund III	Debt - Distressed	2,217,339	0.0%
Wind Point Partners CV1, VII	Acquisition - Medium	1,465,199	0.0%
Wynnchurch Capital Partners V	Acquisition - Medium	11,565,424	0.0%
Stock distribution account	Public Stocks	8,602,931	0.0%
Cash and Equivalents	Cash and Equivalents	12,965,026	0.0%
Total		$ 10,225,481,427	17.4%

* *Fair values are reported by the Systems' Private Equity advisors. Fair values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2024, the net asset values utilized were cash flow adjusted through June 30, 2024.*

Private Credit Program Summary

As of June 30, 2024, the Private Credit program had a fair value of approximately $3.2 billion, representing 5.4% of total plan assets.

Investment Program Description

Investments in Private Credit are similar to Private Equity investments in that they are typically very long-term in nature, not publicly traded, relatively illiquid, and offer the potential for substantially higher returns (along with a commensurate level of risk). The Private Credit portfolio also differs from the Private Equity portfolio and is a separate and distinct composite within Private Risk Assets. The Private Credit asset class is comprised primarily of credit and credit-oriented investments that often provide a current yield, but also includes a wide range of investments and security types including various forms of equity exposure. Primary strategies are distressed debt, direct lending, bankruptcy restructurings, mezzanine debt, bank loans and other credit-driven, income-focused and debt-oriented investment strategies. Investments can be made in the U.S. or foreign countries. In total, the allocation to non-U.S. Private Credit investments will not exceed 50% of the overall Private Credit target allocation. The risks associated with Private Credit will be viewed both in isolation and within the context of the entire fund.

In October 2019 the Board of Trustees approved the development and implementation of a Private Credit Direct Investment program. The Direct Investment program is expected to further advance the goals and objectives of the overall Private Credit program by obtaining additional exposure to underlying credit and credit-related investments. Investment exposure can be obtained either through primary issuance or through secondary market transactions. Exposure to direct private credit or credit-related investments may be obtained through co-investments made on a side-by-side basis with private credit funds, real estate funds, and credit oriented and real estate oriented fund managers where the Systems are an investor or by investing in debt-oriented securities associated with private equity portfolio companies where the original equity investment occurred through private equity funds that the Systems have an existing relationship with. The Direct Investments serve to increase exposure to the Private Credit asset class with little or no additional fees and/or performance carry paid to the underlying private equity or private credit partnerships. The objective of the Direct Investment Program is to leverage existing, high-quality relationships with private credit, credit-oriented, real estate and private equity managers in order to increase commitments to the asset class in a format that does not materially increase overall risk, while simultaneously helping to lower fees and performance carry.

Structure

As of June 30, 2024, Private Credit assets committed* for investment were $6.5 billion. The fair value of funds that have been drawn down and actually invested as of June 30, 2024 was approximately $3.2 billion, representing 5.4% of total assets. The Systems' private credit investment commitments that have not yet been funded were approximately $2.3 billion as of June 30, 2024.

The objective for the Systems' allocation to Private Credit is to achieve returns that are higher than those attainable in the public markets with the added benefit of diversification. The long-term and illiquid nature of the Private Credit asset class dictates that capital must be invested at a measured pace. Pathway Capital Management has been retained by the Systems to provide private credit investment management services through three structures: a discretionary fund-of-funds relationship, an advisory relationship, and a direct investment program. Albourne America, LLC has also been retained to provide private credit advisory services.

Market Overview

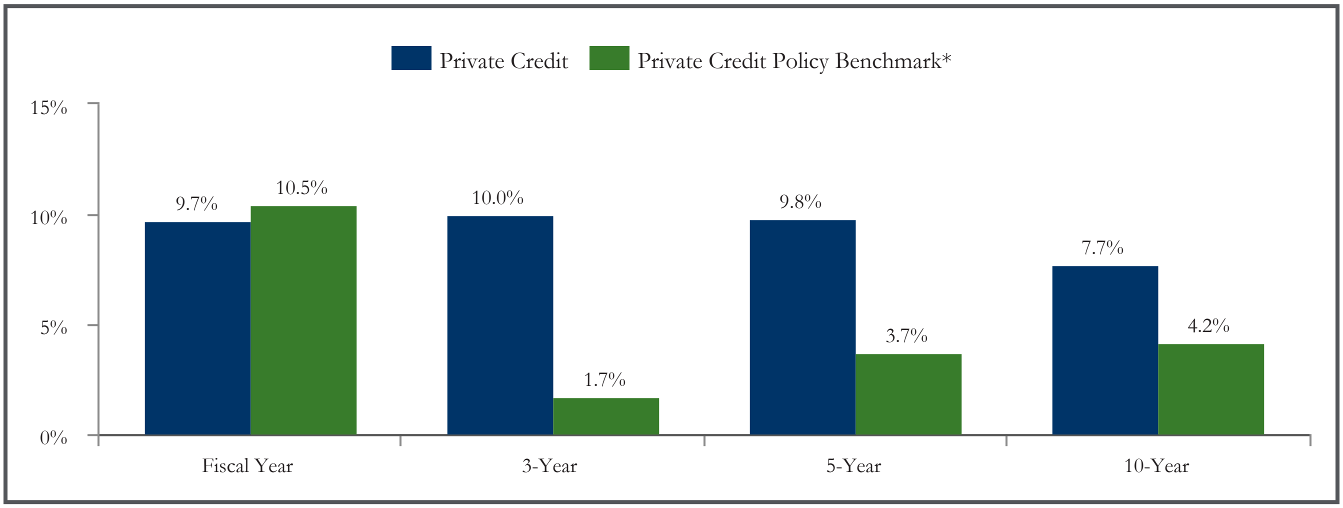
Credit markets generated strong returns in fiscal year 2024, driven by robust demand for new issuances from leverage loans and high yield bonds. The U.S. institutional leveraged loan issuances in the fourth quarter of fiscal year 2024 was three times higher than in the fourth quarter of fiscal year 2023, while high-yield default rates have remained stable. The high-yield market as measured by the private credit benchmark, ICE BofA U.S. High Yield Index, returned 10.5% for fiscal year 2024 as compared to an 8.9% return for fiscal year 2023.

* *Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Fair value reflects capital that has actually been drawn and invested by the partnerships and funds.*

Performance

The total return for the Private Credit program was 9.7% compared to the benchmark return of 10.5% for the fiscal year ended June 30, 2024. Short-term returns can be volatile for the Private Credit program in comparison to a public benchmark, as discussed previously; private assets are more appropriately evaluated over longer time frames. As the table below indicates, the Private Credit portfolio has produced significant absolute and relative returns over time. The ten-year return exceeded the benchmark by 350 basis points. These excess returns are net of fees and expenses.

Private Credit Performance



Private Credit Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Private Credit Return	9.7%	10.0%	9.8%	7.7%
Annualized Policy Benchmark Return*	10.5%	1.7%	3.7%	4.2%
Excess Return	-0.8%	8.3%	6.1%	3.5%

* *The Private Credit Policy Benchmark is the ICE BofA U.S. High Yield Index.*

Private Credit Partnerships

As of June 30, 2024, the Systems were invested in 45 separate partnerships with 22 firms within the Private Credit asset class. One new commitment was made to the Private Credit asset class during fiscal year 2024 for $200 million. The Systems received total distributions from the private credit partnerships of approximately $635 million in fiscal year 2024.

Private Credit Partnerships

Partnerships	Investment Strategy	Fair Value* As of June 30, 2024	% of Total Plan Fair Value
Bayview Opportunity Domestic V	Debt - Distressed	$ 19,275,555	0.0%
Bayview Opportunity Domestic VI	Debt - Distressed	70,820,851	0.1%
Benefit Street Partners Debt Fund IV	Debt - Lending	61,640,839	0.1%
Benefit Street Partners Debt Fund V	Debt - Lending	23,603,498	0.0%
Blackstone Green Private Credit Fund III	Debt - Multi Strategy	12,164,672	0.0%
Caltius IV	Debt - Mezzanine	486,019	0.0%
Centerbridge Special Credit Partners IV	Debt - Multi Strategy	89,653,617	0.2%
Clearlake Flagship Plus Partners	Special Situations - Industry Specific	40,280,083	0.1%
Davidson Kempner Opportunities Fund VI	Debt - Distressed	23,745,399	0.0%
EIG Energy Fund XVI	Debt - Energy	45,708,115	0.1%
EnCap Fund VIII	Special Situations - Industry Specific	15,395,170	0.0%
GSO Capital Solutions Fund III	Debt - Distressed	12,338,577	0.0%
GSO Energy Select Opportunities Fund II	Debt - Distressed	12,004,481	0.0%
GSO European Senior Debt Fund II	Debt - Distressed	56,268,923	0.1%
H.I.G. Capital Bayside IV	Debt - Distressed	10,310,508	0.0%
H.I.G. Capital Bayside V	Debt - Distressed	52,172,432	0.1%
H.I.G. Capital Bayside VI	Debt - Distressed	66,219,002	0.1%
H.I.G. Capital Bayside VII	Debt - Distressed	21,582,712	0.0%
H.I.G. Capital Whitehorse	Debt - Distressed	11,020,331	0.0%
H.I.G. Capital Whitehorse 2020	Debt - Lending	107,972,600	0.2%
HPS Mezzanine Partners 2019	Debt - Mezzanine	67,068,951	0.1%
HPS Specialty Loan Fund 2016	Debt - Mezzanine	32,787,826	0.1%
HPS Specialty Loan Fund V	Debt - Mezzanine	102,583,978	0.2%
HPS Specialty Loan Fund VI	Debt - Mezzanine	1,207,040	0.0%
HPS Strategic Investment Partners V	Debt - Lending	54,069,959	0.1%
Hayfin Direct Lending Fund III	Debt - Lending	63,799,981	0.1%
Hayfin Direct Lending Fund IV	Debt - Lending	63,501,945	0.1%
Hayfin Special Opportunities Fund III SCSp	Debt - Lending	41,213,215	0.1%
HealthCare Royalty Partners IV	Debt - Lending	58,022,047	0.1%
Lone Star Real Estate Fund II	Debt - Distressed	64,605	0.0%
Oberland Capital Healthcare Fund II	Debt - Distressed	32,004,708	0.1%
Oberland Capital Healthcare Fund III	Debt - Distressed	2,267,745	0.0%
OCM Opportunities Fund VIII, VIIIb	Debt - Distressed	4,430,023	0.0%
Pathway Capital Management	Fund-of-Funds	1,668,684,772	2.8%
Sentinel Junior Capital II	Debt - Mezzanine	13,741,668	0.0%
Sixth Street Growth Partners II	Debt - Multi Strategy	18,684,244	0.0%
Sixth Street Opportunities Partners V	Debt - Multi Strategy	26,806,880	0.0%
Summit Partners Credit Fund III	Debt - Lending	11,239,053	0.0%
TA Subordinated Debt Fund V	Debt - Mezzanine	26,793,154	0.0%
TA Subordinated Debt Fund III	Debt - Mezzanine	477,358	0.0%
TA Subordinated Debt Fund IV	Debt - Mezzanine	33,167,712	0.1%
TSSP Adjacent Opportunities Partners	Debt - Multi Strategy	56,546,457	0.1%
TSSP Opportunities Partners IV	Debt - Multi Strategy	18,956,761	0.0%
Cash and Equivalents	Cash and Equivalents	6,589,167	0.0%
Total		**$ 3,157,372,633**	**5.4%**

* *Fair values are reported by the Systems' Private Credit advisors. Fair values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2024, the net asset values utilized were cash flow adjusted through June 30, 2024.*

Private Real Estate Program Summary

As of June 30, 2024, the Private Real Estate program had a fair value of approximately $5.6 billion, representing 9.6% of total plan assets.

Investment Program Description

The Private Real Estate allocation is intended to provide exposure to a diversified portfolio of institutional quality private real estate investments that will provide meaningful, consistent returns and act as a hedge against inflation and as a diversifier to the overall investment portfolio. The specific objectives of the real estate allocation will be to optimize yield and return, preserve capital and enhance portfolio value across market cycles. The risks associated with Private Real Estate will be viewed both in isolation and within the context of the entire fund.

Structure

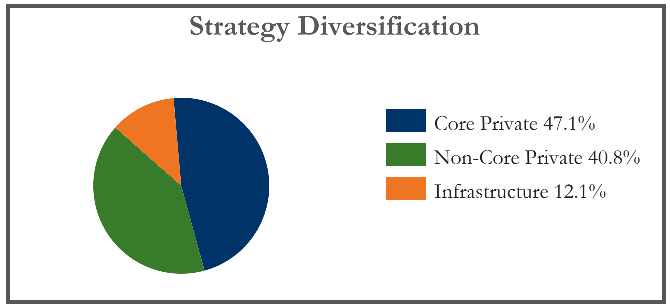
As of June 30, 2024, the Systems' Private Real Estate assets committed* for investment were $8.4 billion. The fair value of funds that had been drawn down and actually invested as of June 30, 2024 was approximately $5.6 billion, representing 9.6% of total assets. The Systems' private real estate investment commitments that had not yet been funded were approximately $2.4 billion as of June 30, 2024.

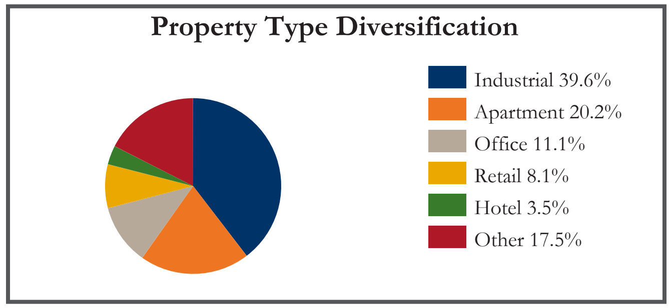
Within the overall Real Estate allocation, the Systems have established a 55% target allocation to non-core real estate (inclusive of infrastructure) and a 45% allocation to core private real estate. Non-core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise or skill to mitigate the business and leasing risk that may be associated with individual investments. Non-core investments have greater associated risk compared to core investments. Core investments include existing, substantially leased income-producing properties located mainly in metropolitan areas that exhibit reasonable economic diversification and growth.

* *Committed capital reflects the total amount of capital that the Systems are legally obligated to supply to the partnerships and funds as the capital is needed to invest in underlying holdings. Fair value reflects capital that has actually been drawn and invested by the partnerships and funds.*

The following pie charts indicate the diversification (utilizing the fair value of invested assets) of the Systems' Real Estate holdings as of June 30, 2024 from both the strategy and property type perspectives.

Private Real Estate Diversification





Market Overview

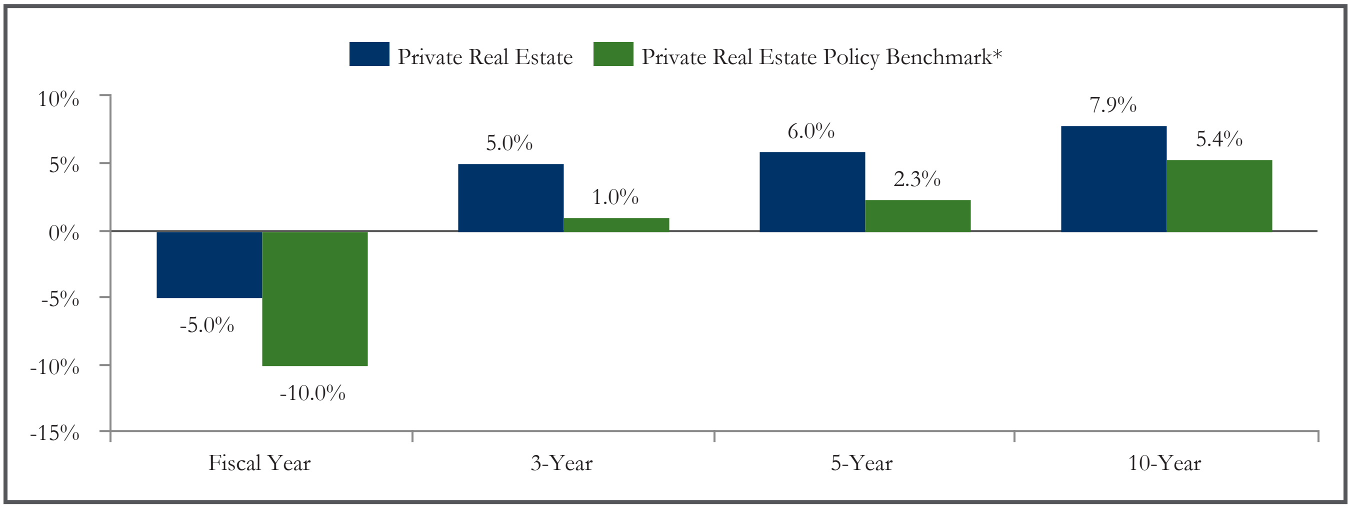
The Private Real Estate benchmark, NCREIF Fund Index – Open Diversified Core Equity (NFI-ODCE), returned -10.0% for fiscal year 2024 compared to a -10.7% return for fiscal year 2023. The real estate market has continued to face challenges such as high borrowing costs and substantial repricing through the end of calendar year 2023 and into 2024. The office sector experienced increasing vacancy rates, contributing to the negative performance over the year, however the apartment and retail sectors have recently shown signs of improving fundamentals and declining vacancy rates.

The Systems maintain a sizable allocation to high-quality, stabilized real estate assets (core) due to the secure income return. Additionally, the Systems have an allocation to non-core assets to enhance return to the overall real estate portfolio. The Systems will continue to focus real estate efforts on investments that complement the existing portfolio.

Performance

The total return for the Private Real Estate program was -5.0% compared to the benchmark return of -10.0% resulting in 500 basis points of excess return for the fiscal year ended June 30, 2024. Despite the negative return for the year, the Systems' Private Real Estate program has produced meaningful absolute returns and very strong relative returns over the ten-year time period as noted below. These excess returns are net of fees and expenses.

Private Real Estate Performance



Private Real Estate Statistical Performance

Portfolio Characteristics	Fiscal Year	3-Year	5-Year	10-Year
Annualized Private Real Estate Return	-5.0 %	5.0%	6.0 %	7.9%
Annualized Policy Benchmark Return*	-10.0 %	1.0%	2.3%	5.4%
Excess Return	5.0%	4.0%	3.7%	2.5%

* *Effective January 1, 2016, the Real Estate Policy Benchmark is the NCREIF Open End Diversified Core Equity net Index (NFI-ODCE). The NCREIF Property Index is used for prior periods.*

Private Real Estate Partnerships

As of June 30, 2024, the Systems were invested in 84 separate partnerships with 38 firms within the Private Real Estate asset class. In fiscal year 2024, the Systems committed to six new partnerships totaling $628 million. The Systems received total distributions from the real estate partnerships of approximately $300 million during the year.

Private Real Estate Partnerships

Partnerships	Investment Strategy		Fair Value* As of June 30, 2024	% of Total Plan Fair Value
AEW Core Property Fund	Core - Private	$	103,094,931	0.2%
AEW Partners Real Estate Fund IX	Non-Core - Private		87,820,152	0.1%
Almanac Realty Securities VIII, IX	Non-Core - Private		86,177,762	0.1%
Alterna Core Capital Assets Fund II	Infrastructure		36,705,960	0.1%
Alterra IOS Venture III	Non-Core - Private		6,656,057	0.0%
Angelo Gordon Realty Value Fund X, XI	Non-Core - Private		83,244,444	0.1%
Ares Industrial Real Estate Fund	Non-Core - Private		164,943,076	0.3%
Asana Partners Fund I, II, III	Non-Core - Private		216,899,571	0.4%
Bain Capital Real Estate Fund II-A	Non-Core - Private		65,893,577	0.1%
BlackRock Global Energy & Power Infrastructure III & IV D	Infrastructure		102,893,614	0.2%
Blackstone BioMed Life Science Real Estate	Core - Private		89,889,036	0.2%
Blackstone R.E. Partners V, VI, VII, VIII, IX, X	Non-Core - Private		233,132,233	0.4%
Blackstone Real Estate Partners Europe VI & VII (Cayman)	Non-Core - Private		84,159,605	0.1%
Blackstone Real Estate Partners Asia I, II, III	Non-Core - Private		110,690,165	0.2%
Brockton Capital II	Non-Core - Private		4,241,173	0.0%
Carlyle Property Investors	Core - Private		190,450,358	0.3%
Carlyle Realty VI, VII, VIII, IX, Europe III	Non-Core - Private		105,722,307	0.2%
CBRE US Value 7	Non-Core - Private		6,824	0.0%
CIM Fund III, VIII	Non-Core - Private		54,956,842	0.1%
Cortland Growth and Income	Core - Private		130,976,096	0.2%
CPI Capital Partners Europe	Non-Core - Private		310,305	0.0%
Dune Real Estate Fund I	Non-Core - Private		39,001	0.0%
Exeter Industrial Value Fund IV, V, VI, Europe Logistics	Non-Core - Private		173,813,472	0.3%
Heitman Value Partners IV, V	Non-Core - Private		124,824,502	0.2%
iCON Infrastructure Partners VI	Infrastructure		51,097,256	0.1%
IFM Global Infrastructure (US) L.P. Class A Interests	Infrastructure		135,548,905	0.2%
IPI Partners II-A, III-A	Non-Core - Private		159,543,715	0.3%
JPMorgan Special Situation Property Fund	Non-Core - Private		132,546,311	0.2%
JPMorgan Strategic Property Fund	Core - Private		232,266,574	0.4%
KKR Diversified Core Infrastructure Fund	Infrastructure		108,555,353	0.2%
KKR R.E. Fund I, II, III SCSp & Sec. Disloc. Oppt. Co-Inv.	Non-Core - Private		87,573,591	0.1%
LaSalle Asia Opportunity Fund III	Non-Core - Private		289,703	0.0%
LaSalle Property Fund	Core - Private		378,813,856	0.6%
Lone Star Real Estate Fund V, VI	Non-Core - Private		683,199	0.0%
Macquarie Infrastructure Partners IV, V, VI	Infrastructure		244,971,545	0.4%
MetLife Core Property Fund	Core - Private		153,584,566	0.3%
Morgan Stanley Prime Property Fund	Core - Private		432,623,148	0.7%
Noble Hospitality III, IV-Income, IV-Value Added, V	Non-Core - Private		101,708,266	0.2%
Principal Enhanced Property Fund	Core - Private		151,448,025	0.3%
Prologis Targeted U.S. Logistics Holdings	Core - Private		457,806,935	0.8%
Prudential PRISA Fund	Core - Private		183,560,714	0.3%
Prudential PRISA III	Non-Core - Private		81,415,210	0.1%
Standard Life European Real Estate Fund III	Non-Core - Private		3,965,957	0.0%
Starwood Hospitality Fund	Non-Core - Private		2,177,319	0.0%
TPG Real Estate Partners IV	Non-Core - Private		15,246,732	0.0%
UBS Trumbull Property Fund	Core - Private		137,217,262	0.2%
Westbrook R.E. Fund VII, VIII, IX, X, XI	Non-Core - Private		101,555,518	0.2%
Cash and Equivalents	Cash and Equivalents		12,180,161	0.0%
Total		**$**	**5,623,920,884**	**9.6%**

* *Fair values are reported by the Systems' Private Real Estate advisors. Fair values reflect the most current net asset values. In instances where the most current net asset values were not as of June 30, 2024, the net asset values utilized were cash flow adjusted through June 30, 2024.*

U.S. Public Equity Broker Commissions Report

Brokerage Firm	Shares Traded	Dollars Traded	Commissions Paid	Cost Per Share
Bank of America	37,488,307	$ 1,491,720,438	$ 306,874	$ 0.01
Morgan Stanley & Co.	50,099,390	1,853,260,165	280,184	0.01
Goldman Sachs & Co.	38,730,338	1,219,580,529	260,006	0.01
Pershing LLC	10,327,988	593,791,947	236,898	0.02
National Financial Services Corp.	8,851,428	717,098,935	225,562	0.03
JP Morgan Chase	24,129,619	912,648,202	85,432	—
Jefferies & Co.	5,516,278	559,687,410	81,175	0.01
Citigroup Global Markets, Inc.	31,435,598	1,067,935,225	79,047	—
Instinet, LLC	6,558,873	378,684,568	72,723	0.01
Piper Jaffray & Co.	10,953,458	736,401,873	68,392	0.01
Other (<$68,000)	83,550,548	4,162,907,446	732,098	0.01
Total	**307,641,825**	**$ 13,693,716,738**	**$ 2,428,391**	**$ 0.01**

Non U.S. Public Equity Broker Commissions Report

Brokerage Firm	Shares Traded	Dollars Traded	Commissions Paid	Cost (Basis Points)
Merrill Lynch	55,625,447	$ 573,962,879	$ 173,437	3.0
JP Morgan Chase	154,976,478	552,674,955	162,287	2.9
Morgan Stanley & Co.	82,376,678	602,140,043	150,339	2.5
UBS Securities, LLC	103,652,009	456,270,199	141,873	3.1
Goldman Sachs & Co.	71,755,316	526,395,970	130,274	2.5
Citigroup Global Markets, Inc.	58,055,050	175,208,218	101,201	5.8
Instinet, LLC	152,802,113	336,271,637	96,802	2.9
Jefferies & Co.	39,946,337	210,704,277	78,771	3.7
CLSA Ltd.	99,285,385	154,037,302	60,258	3.9
HSBC Bank	78,887,381	127,274,551	45,912	3.6
Other (<$45,000)	222,303,532	1,098,758,228	359,019	3.3
Total	**1,119,665,726**	**$ 4,813,698,259**	**$ 1,500,173**	**3.1**

Investment Summary as of June 30, 2024						
		Percent of Total Fair Value			Percent of Market Exposure	
Asset Type	**Fair Value**	**FY 2024**	**FY 2023**	**Market Exposure*** **	**FY 2024**	**FY 2023**
Public Risk Assets						
U.S. Public Equity	$ 15,697,447,946	26.7%	25.6%	$ 15,697,447,946	26.7%	25.6%
Non-U.S. Public Equity	10,363,258,802	17.7%	17.1%	10,363,258,802	17.7%	17.1%
Public Credit	5,000	0.0%	0.0%	5,000	0.0%	0.0%
Hedged Assets	4,705,144,821	8.0%	8.4%	4,705,144,821	8.0%	8.4%
Total Public Risk Assets	***30,765,856,569***	***52.4%***	***51.1%***	***30,765,856,569***	***52.4%***	***51.1%***
Safe Assets						
U.S. Treasuries	6,982,228,619	11.9%	12.6%	6,982,228,619	11.9%	12.6%
U.S. TIPS	373,826,133	0.6%	0.6%	373,826,133	0.6%	0.6%
Cash & Cash Equivalents	1,527,229,539	2.6%	1.9%	1,527,229,539	2.6%	1.9%
Total Safe Assets	***8,883,284,291***	***15.1%***	***15.1%***	***8,883,284,291***	***15.1%***	***15.1%***
Private Risk Assets						
Private Real Estate	5,623,920,884	9.6%	10.3%	5,623,920,884	9.6%	10.3%
Private Equity	10,225,481,427	17.4%	18.0%	10,225,481,427	17.4%	18.0%
Private Credit	3,157,372,633	5.4%	5.3%	3,157,372,633	5.4%	5.3%
Total Private Risk Assets	***19,006,774,944***	***32.4%***	***33.6%***	***19,006,774,944***	***32.4%***	***33.6%***
Cash & Equivalents*	***62,032,199***	***0.1%***	***0.2%***	***62,032,199***	***0.1%***	***0.2%***
Total Investments**	**$ 58,717,948,003**	**100.0%**	**100.0%**	**$ 58,717,948,003**	**100.0%**	**100.0%**
Reconciliation with Financial Statements						
Total from above	$ 58,717,948,003					
Accrued payable for investments purchased	2,142,772,390					
Accrued income payable	2,016,013					
Accrued receivable for investments sold	(1,347,243,098)					
Accrued income receivable	(121,318,964)					
Short-term investments designated for benefits	(796,044,391)					
Statements of Fiduciary Net Position	**$ 58,598,129,953**					

* *Managers may hold cash or cash equivalents as part of an active management strategy. Cash or cash equivalents held as part of an active management strategy are not separately listed.*
** *Total Investments includes accrued income as of June 30, 2024.*
****The Systems have the ability to utilize total plan leverage, however no total plan leverage was utilized during fiscal year 2024 and was zero for the year-ended June 30, 2023.*

Investment Expenses for the Fiscal Year Ended June 30, 2024		
Investment Managers		
Investment Management Fees		
NISA Investment Advisors - Core	$	5,108,714
NISA Investment Advisors - TIPS		243,276
Safe Assets Fees		5,351,990
Allspring Global Investments, LLC		1,024,931
AQR Capital Management		1,534,342
BlackRock Investment Management		281,229
Coatue Long Only Partners		3,799,546
Coho Partners		445,220
Eagle Capital Management		887,315
GQG Partners, LLC		1,392,803
Grantham, Mayo, Van Otterloo & Co.		5,440,719
Jacobs Levy Equity Management, Inc.		356,230
Martingale Asset Management		1,238,422
Russell Investments		253,814
Select Equity Group		54,716
Westwood Management		1,573,076
Zevenbergen Capital		1,053,729
U.S. Public Equity Large-Cap Fees		19,336,092
ABS Investment Management		1,191,009
Acadian Asset Management		3,559,143
Alliance Bernstein L.P.		667,851
Allspring Global Investments, LLC		845,601
AQR Capital Management		1,967,781
Arrowstreet Capital		19,668,299
BlackRock Investment Management		327,339
Coronation Asset Management (Proprietary) Limited		936,390
GQG Partners, LLC		1,758,958
Invesco Advisers, Inc.		728,625
MFS Institutional Advisors		5,988,661
The Rock Creek Group		2,659,103
Walter Scott & Partners Limited		2,489,832
Non-U.S. Public Equity Fees		42,788,592
AQR Capital Management		2,312,189
BlackRock Investment Management		101,285
Greenhouse Funds		539,191
Martingale Asset Management		779,378
RK Capital Management		3,590,878
Systematic Financial Management		1,351,320
U.S. Public Equity Small-Cap Fees		8,674,241
Alpha Overlay Fees		41,545,442
Hedged Assets Fees		123,745,766
Private Real Estate Fees		56,188,674
Private Credit Fees		67,256,148
Private Equity Fees		177,112,828
Commission Recapture Income		(25,398)
Investment Management Expense		541,974,375
Custodial Services		
JP Morgan Chase, NA		1,822,029
Custodial Fees		1,822,029
Investment Consultants		
Albourne America, LLC		879,800
Institutional Shareholder Services, Inc.		74,500
Glass Lewis		77,765
Pathway Consulting		4,497,344
Russell Investments Capital, LLC		459,013
Townsend		350,000
Investment Consultant Fees		6,338,422
Legal Expenses		1,041,958
Staff Investment Expenses		11,137,165
Total Investment Expenses	$	562,313,949

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Evolve

Staying focused, while staying agile

The world has faced unprecedented challenges over the last 10 years. Despite a pandemic that shut down most traditional in-person business connections, historically volatile investment markets, extended periods of high inflation and legislative challenges, PSRS/PEERS has not only survived but thrived. Our Board of Trustees, management and staff demonstrate continued adaptability and resilience, which helps us stay on track.

Actuarial Section

Certification of Actuarial Results

November 20, 2024

Board of Trustees
Public School Retirement System of Missouri
Public Education Employee Retirement System of Missouri
3210 West Truman Boulevard
Jefferson City, MO 65109

Re: Certification of Actuarial Results as of June 30, 2024

Dear Members of the Board:

At your request, we have performed actuarial valuations of the Public School Retirement System ("PSRS") and the Public Education Employee Retirement System ("PEERS") of Missouri (collectively, "PSRS and PEERS of Missouri") as of June 30, 2024. An actuarial valuation of each System is performed annually for purposes of preparing the required accounting information under Governmental Accounting Standards and for purposes of determining the Actuarially Determined Contribution under the Board's funding policy. Our June 30, 2024 actuarial valuation reports have been prepared pursuant to an engagement letter between PSRS and PEERS of Missouri and PwC US Tax LLP (together with its other U.S.-based affiliated entities is referred to herein as "PwC US"), dated April 25, 2024, and are intended solely for the use and benefits of PSRS and PEERS of Missouri and not for reliance by any other person.

The actuarial valuations are based upon:

a. *Benefit Provisions* - Our understanding of the benefit provisions in effect on the valuation date under Missouri Revised Statutes Chapter 169, which include amendment to the Statutes by Senate Bill 727 (officially titled SS#2 SCS SB 727) that were passed prior to the June 30, 2024 valuation date. Senate Bill 727 enacted the following change to the working after retirement provisions of both PSRS and PEERS:
   - If a retired member returns to work and exceeds the statutory limitations that trigger a suspension of the member's retirement allowance, then in any month in which limitations are exceeded the member shall not be eligible to receive their retirement allowance, or the System shall recover the amount earned in excess of the limitations, whichever is less.

b. *Data Relative to the Members of the Systems* - Data for all members of each System as of June 30, 2024 was provided by PSRS and PEERS of Missouri staff. PwC US relied on the data provided. PwC US reviewed the data for reasonableness relative to the prior year data, but the data was not audited.

c. *Assets of the Fund* - The values of the trust fund assets as of June 30, 2024 for each System were also provided by PSRS and PEERS of Missouri staff. An actuarial value of assets, with investment gains and losses relative to the assumed return recognized over five years, is used in the development of the Actuarially Determined Contribution Rates.

d. *Actuarial Cost Method* - The actuarial cost method utilized for accounting purposes is the Entry Age Normal, Level Percent method, as required by GASB Statement No. 67. The Board has elected in its funding policy to use the same cost method in the determination of the Actuarially Determined Contribution Rates. The objective of this method is to allocate the cost of benefits as a level percentage of pay over the entire career of each member. On a funding basis, any Unfunded Actuarial Accrued Liability ("UAAL") is separately financed as a level percentage of payroll over a fixed 30-year period, where a new 30-year amortization base is established for the gain or loss that occurred during the year prior to the valuation date. Increases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over a fixed 20-year period. The passage of Senate Bill 727 did not impact the valuation of the Actuarial Accrued Liability for PSRS or PEERS.

e. *Actuarial Assumptions* - The actuarial assumptions used for the June 30, 2024 valuations were based on an experience study that was completed for each System in May 2021. All economic and demographic assumptions were reviewed, and certain assumptions were updated for the June 30, 2021 valuations, where appropriate, based on the results of the 2021 experience study. The retirement rates assumption was updated for the June 30, 2023 PSRS valuation due to the passage

PwC US, One North Wacker Drive Chicago, IL,60606 T: (312)298 2000, F: (312) 298 2001, www.pwc.com/us

Certification of Actuarial Results, continued

of Senate Bill 75 (HCS/SS/SB 75), which amended the PSRS benefit formula multiplier from 2.50% to 2.55% for members who retire with 32 or more years of service. Otherwise, the assumptions remain consistent with the June 30, 2021, June 30, 2022, and June 30, 2023 valuations that have been completed since the 2021 experience study. The next experience study is scheduled to be completed prior to the 2026 valuation.

For accounting purposes, the actuarial assumptions and methods used in this valuation were selected and approved by the Board and are in accordance with our understanding of GASB Statement No. 67.

For funding purposes, the actuarial assumptions and methods were selected and approved by the Board and are consistent with the funding policy adopted by the Board and summarized below. In general, the methods provide orderly funding of all benefits being accrued, as well as funding of the Unfunded Actuarial Accrued Liability over a period of 30 years. The five-year smoothing method elected by the Board in determining the Actuarial Value of Assets may accelerate or lengthen the effective funding period, depending on whether investment gains or losses are experienced. In our opinion, the actuarial assumptions and methods are reasonable for purposes of the actuarial valuations and meet the parameters set by the Actuarial Standards of Practice.

In order to establish long-term, consistent methods for pre-funding the benefits of each System, the Board of Trustees has adopted a funding policy. The objective is to achieve a funded ratio of 100% over a closed 30-year period. For this purpose, the funded ratio is defined as the Actuarial Value of Assets divided by the Actuarial Accrued Liability determined under the Entry Age Normal Level Percent cost method and the actuarial assumptions adopted by the Board.

The Board has identified the following principles to guide its funding policy:

1. Maintain adequate assets so that current plan assets plus future contributions and investment earnings should be sufficient to fund all benefits expected to be paid to members and their beneficiaries.
2. Maintain stability of contribution rates, consistent with other funding objectives.
3. Maintain public policy goals of accountability and transparency. Each policy element is clear in intent and effect, and each should allow an assessment of whether, how, and when the funding requirements of the plan will be met.
4. Promote intergenerational equity. Each generation of members and employers should incur the cost of benefits for the employees who provide services to them, rather than deferring those costs to future members and employers.
5. Provide a reasonable margin for adverse experience to help offset risks.
6. Review the investment earnings assumption in conjunction with the periodic asset / liability study and in consideration of the Board's risk profile.
7. Review demographic and economic assumptions in conjunction with the periodic experience study performed by an actuary.
8. Continue progress of systematic reduction of the Unfunded Actuarial Accrued Liabilities ("UAAL") while keeping the member and employer contribution rates at or near 14.5% of pay for PSRS and 6.86% of pay for PEERS, the contribution rates first paid during 2011-2012.

The Actuarially Determined Contribution Rates developed from the June 30, 2024 valuations reflect these principles.

We provide the following information that was used by PSRS and PEERS of Missouri staff to prepare the required schedules and other data in the Actuarial Section:

- Schedules of Funding Progress
- Required Contribution Rates and Amortizations of Unfunded Liability
- Reconciliation of Unfunded Actuarial Accrued Liability
- Solvency Tests
- Schedules of Active Member Valuation Data
- Schedules of Retirees and Beneficiaries Added to and Removed from Retirement Rolls

We also provided the information that was used by PSRS and PEERS of Missouri staff to prepare the following schedules and other data in the Financial Section:

- Sensitivity of the Net Pension Liabilities to Changes in the Discount Rate
- Schedules of Changes in the Employers' Net Pension Liability
- Schedules of Employers' Net Pension Liability
- Schedules of Employer Contributions

In preparing the results presented herein, we have used and evaluated actuarial models in accordance with Actuarial Standards of Practice ("ASOP") No. 56. PwC US uses the ProVal valuation system developed by Winklevoss Technologies, LLC in performing valuations of pension and postretirement benefit plans. We have utilized the ProVal software to prepare the valuation results presented herein. ProVal is used to value participant data through projecting retirement benefits and applying plan specific assumptions, methods and plan provisions under applicable accounting and funding standards. PwC US is not aware of any material limitations or known weaknesses in the ProVal software.

A range of results, different from those presented in this report could be considered reasonable. Future actuarial measurements may differ significantly from the current measurement presented in this report due to a number of factors including but not limited to: plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methods used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); rounding conventions; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

To the best of our knowledge, our actuarial reports are complete and accurate and have been prepared in accordance with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Our calculations also reflect our understanding of the requirements of Missouri state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC US practitioners involved in this engagement and PSRS and PEERS of Missouri that may impair our objectivity.

We certify that the information presented herein, and in our June 30, 2024 actuarial valuation reports, is accurate and fairly portrays the actuarial position of the Plans administered by PSRS and PEERS of Missouri as of June 30, 2024, based on the underlying census data, asset information, and selected assumptions and methods.

Sincerely,

Cindy Fraterrigo

Cindy Fraterrigo, FSA, EA, MAAA
Principal, PwC US Tax LLP

Brandon A. Robertson

Brandon Robertson, ASA, EA, MAAA
Director, PwC US Consulting LLP

Schedule of Funding Progress

Public School Retirement System of Missouri

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
6/30/15	$ 34,073,415	$ 40,610,540 [1]	$ 6,537,125	83.9%	$ 4,508,242	145.0%
6/30/16	35,419,278	41,744,619 [2]	6,325,341	84.8%	4,556,137	138.8%
6/30/17	37,373,740	44,501,771 [2]	7,128,031	84.0%	4,655,169	153.1%
6/30/18	39,211,452	46,702,002 [2]	7,490,550	84.0%	4,759,665	157.4%
6/30/19	40,498,479	47,973,829 [1]	7,475,350	84.4%	4,844,249	154.3%
6/30/20	41,705,059	49,641,020 [1]	7,935,961	84.0%	4,919,286	161.3%
6/30/21	45,033,548	52,834,297 [2]	7,800,749	85.2%	5,039,838	154.8%
6/30/22	47,185,300	55,405,260 [1]	8,219,960	85.2%	5,140,286	159.9%
6/30/23	49,122,410	57,193,631 [3]	8,071,221	85.9%	5,327,050	151.5%
6/30/24	51,430,822	58,971,485 [1]	7,540,663	87.2%	5,518,376	136.6%

[1] *There were no significant legislative changes in fiscal years 2015, 2019, 2020, 2022 and 2024 impacting the valuation.*
[2] *There were no significant legislative changes in fiscal years 2016, 2017, 2018 and 2021, however actuarial assumptions were revised.*
[3] *The reinstatement of the 2.55% provision for 32 or more years of service is included in the AAL for 2023.*

Schedule of Funding Progress

Public Education Employee Retirement System of Missouri

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
6/30/15	$ 3,915,199	$ 4,512,317 [1]	$ 597,118	86.8%	$ 1,469,772	40.6%
6/30/16	4,157,427	4,809,666 [2]	652,239	86.4%	1,519,081	42.9%
6/30/17	4,470,270	5,209,369 [2]	739,099	85.8%	1,558,183	47.4%
6/30/18	4,774,781	5,542,478 [2]	767,697	86.1%	1,636,008	46.9%
6/30/19	5,019,868	5,809,485 [1]	789,617	86.4%	1,665,654	47.4%
6/30/20	5,257,847	6,089,401 [1]	831,554	86.3%	1,732,243	48.0%
6/30/21	5,756,526	6,560,854 [2]	804,328	87.7%	1,758,535	45.7%
6/30/22	6,113,154	6,998,708 [1]	885,554	87.3%	1,864,704	47.5%
6/30/23	6,459,684	7,401,637 [1]	941,953	87.3%	2,037,531	46.2%
6/30/24	6,881,439	7,810,188 [1]	928,749	88.1%	2,247,554	41.3%

[1] *There were no significant legislative changes in fiscal years 2015, 2019, 2020, 2022, 2023 and 2024 impacting the valuation.*
[2] *There were no significant legislative changes in fiscal years 2016, 2017, 2018 and 2021, however actuarial assumptions were revised.*

Required Contribution Rate & Amortization of Unfunded Liability

Public School Retirement System of Missouri

For the fiscal year ended June 30, 2024

	Percentage of Payroll
Normal cost rate	16.72 %
Rate needed to fund the UAAL	11.26 %
Benchmark contribution rate - normal cost plus a rate to fund the UAAL over 17.6 years	27.98%
Additional amount towards funding the UAAL	1.02%
Recommended rate for Fiscal Year 2026	29.00 %

Required Contribution Rate & Amortization of Unfunded Liability

Public Education Employee Retirement System of Missouri

For the fiscal year ended June 30, 2024

	Percentage of Payroll
Normal cost rate	10.02%
Rate needed to fund the UAAL	3.20%
Benchmark contribution rate - normal cost plus a rate to fund the UAAL over 18.8 years	13.22%
Additional amount towards funding the UAAL	0.50%
Recommended rate for Fiscal Year 2026	13.72%

Reconciliation of Unfunded Actuarial Accrued Liability				
Public School Retirement System of Missouri				
As of June 30, 2024				
(1)	Unfunded actuarial liability as of July 1, 2023		$	8,071,221,140
(2)	Changes in Unfunded Actuarial Accrued Liability			
	a. Impact of Plan Changes			—
	b. Actuarial (Gains)/Losses			
	i. From investment	(628,967,410)		
	ii. From actuarial liabilities due to assumption changes	—		
	iii. From actuarial liabilities due to actual vs. expected COLA	194,893,325		
	iv. From actuarial liabilities due to actual vs. expected salary changes	406,989,424		
	v. From actuarial liabilities due to other demographic experience	(412,231,597)		
	vi. Total Unfunded Actuarial Accrued Liability (Gain)/Loss			(439,316,258)
	c. Total New Amortization Bases: (2)(a) + (2)(b)(vi)			(439,316,258)
	d. Net Change in Existing Bases Due to Prior Year Contributions, Net of Interest			(91,241,519)
	e. Total changes in Unfunded Actuarial Accrued Liability			(530,557,777)
(3)	Unfunded Actuarial Accrued Liability as of June 30, 2024		$	7,540,663,363

Reconciliation of Unfunded Actuarial Accrued Liability				
Public Education Employee Retirement System of Missouri				
As of June 30, 2024				
(1)	Unfunded actuarial liability as of July 1, 2023		$	941,952,979
(2)	Changes in Unfunded Actuarial Accrued Liability			
	a. Impact of Plan Changes			—
	b. Actuarial (Gains)/Losses			
	i. From investment	(103,036,046)		
	ii. From actuarial liabilities due to assumption changes	—		
	iii. From actuarial liabilities due to actual vs. expected COLA	20,261,495		
	iv. From actuarial liabilities due to actual vs. expected salary changes	129,275,632		
	v. From actuarial liabilities due to other demographic experience	(52,710,216)		
	vi. Total Unfunded Actuarial Accrued Liability (Gain)/Loss			(6,209,135)
	c. Total New Amortization Bases: (2)(a) + (2)(b)(vi)			(6,209,135)
	d. Net Change in Existing Bases Due to Prior Year Contributions, Net of Interest			(6,995,007)
	e. Total changes in Unfunded Actuarial Accrued Liability			(13,204,142)
(3)	Unfunded Actuarial Accrued Liability as of June 30, 2024		$	928,748,837

Schedule of Active Member Valuation Data

Public School Retirement System of Missouri

Actuarial Valuation Date	Number of Employers	Number of Members	Covered Annual Payroll (000's)	Average Annual Salary	% Increase in Average Salary	Average Attained Age	Average Years of Service
6/30/15	535	78,138	$ 4,508,242	$ 58,582	-0.5%	42.0	11.5
6/30/16	534	78,129	4,556,137	59,005	0.7%	42.0	11.6
6/30/17	534	78,274	4,655,169	60,643	2.8%	42.0	11.7
6/30/18	533	78,700	4,759,665	61,634	1.6%	42.1	11.8
6/30/19	533	78,863	4,844,249	62,764	1.8%	42.2	12.0
6/30/20	533	78,848	4,919,286	63,688	1.5%	42.3	12.2
6/30/21	533	78,944	5,039,838	65,639	3.1%	42.3	12.3
6/30/22	533	78,973	5,140,286	67,225	2.4%	42.4	12.4
6/30/23	534	78,437	5,327,050	69,995	4.1%	42.5	12.4
6/30/24	534	78,001	5,518,376	72,936	4.2%	42.6	12.5

Schedule of Active Member Valuation Data

Public Education Employee Retirement System of Missouri

Actuarial Valuation Date	Number of Employers	Number of Members	Covered Annual Payroll (000's)	Average Annual Salary	% Increase in Average Salary	Average Attained Age	Average Years of Service
6/30/15	532	46,864	$ 1,469,772	$ 32,220	1.8%	48.4	8.6
6/30/16	530	47,851	1,519,081	32,887	2.1%	48.3	8.6
6/30/17	530	47,953	1,558,183	33,643	2.3%	48.3	8.5
6/30/18	530	48,549	1,636,008	34,361	2.1%	48.2	8.4
6/30/19	530	49,345	1,665,654	35,111	2.2%	48.1	8.3
6/30/20	530	50,179	1,732,243	35,800	2.0%	48.0	8.2
6/30/21	530	49,572	1,758,535	37,257	4.1%	47.9	8.2
6/30/22	530	50,179	1,864,704	39,112	5.0%	47.5	7.9
6/30/23	531	51,787	2,037,531	41,326	5.7%	47.2	7.6
6/30/24	531	53,572	2,247,554	44,048	6.6%	46.8	7.3

Solvency Test

Public School Retirement System of Missouri

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Accrued Liability for: Member Contributions (1)	Current Retirees & Beneficiaries (2)	Active & Inactive Members Employer Financed Portion (3)	Actuarial Value of Assets	Percentage of Actuarial Liabilities Covered by Actuarial Value of Assets for: (1)	(2)	(3)
6/30/15	$ 6,787,038	$ 24,674,171	$ 9,149,331	$ 34,073,415	100.0%	100.0%	28.6%
6/30/16	6,994,370	25,895,012	8,855,237	35,419,278	100.0%	100.0%	28.6%
6/30/17	7,267,682	27,544,082	9,690,007	37,373,740	100.0%	100.0%	26.4%
6/30/18	7,593,869	28,811,151	10,296,982	39,211,452	100.0%	100.0%	27.3%
6/30/19	7,928,036	29,429,993	10,615,800	40,498,479	100.0%	100.0%	29.6%
6/30/20	8,268,226	30,515,563	10,857,231	41,705,059	100.0%	100.0%	26.9%
6/30/21	8,502,510	32,740,719	11,591,068	45,033,548	100.0%	100.0%	32.7%
6/30/22	8,674,301	34,541,914	12,189,045	47,185,300	100.0%	100.0%	32.6%
6/30/23	8,993,273	35,759,519	12,440,839	49,122,410	100.0%	100.0%	35.1%
6/30/24	9,485,870	36,785,307	12,700,308	51,430,822	100.0%	100.0%	40.6%

Solvency Test

Public Education Employee Retirement System of Missouri

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Accrued Liability for: Member Contributions (1)	Current Retirees & Beneficiaries (2)	Active & Inactive Members Employer Financed Portion (3)	Actuarial Value of Assets	Percentage of Actuarial Liabilities Covered by Actuarial Value of Assets for: (1)	(2)	(3)
6/30/15	$ 892,547	$ 2,040,647	$ 1,579,123	$ 3,915,199	100.0%	100.0%	62.2%
6/30/16	926,274	2,205,328	1,678,064	4,157,427	100.0%	100.0%	61.1%
6/30/17	962,156	2,453,877	1,793,336	4,470,270	100.0%	100.0%	58.8%
6/30/18	1,004,383	2,678,124	1,859,971	4,774,781	100.0%	100.0%	58.7%
6/30/19	1,050,907	2,861,160	1,897,418	5,019,868	100.0%	100.0%	58.4%
6/30/20	1,097,457	3,071,099	1,920,845	5,257,847	100.0%	100.0%	56.7%
6/30/21	1,122,129	3,430,561	2,008,164	5,756,526	100.0%	100.0%	59.9%
6/30/22	1,147,612	3,755,741	2,095,355	6,113,154	100.0%	100.0%	57.7%
6/30/23	1,204,718	4,005,833	2,191,086	6,459,684	100.0%	100.0%	57.0%
6/30/24	1,301,326	4,201,230	2,307,632	6,881,439	100.0%	100.0%	59.8%

PSRS Schedule of Retirees and Beneficiaries Added to and Removed from Retirement Rolls

	Added to Rolls		Removed from Rolls		Rolls End of Year			% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	Average Annual Allowances	in Annual Allowance	in Average Annual Allowance
2023-2024									
Service Retirees	2,826	$ 124,486,777	1,279	$ 57,332,016	64,809	$ 3,151,291,544	$ 48,624	4.16 %	1.67 %
Disability Retirees	24	728,935	26	724,433	1,019	33,111,820	32,494	1.54	2.24
Beneficiaries	458	18,738,782	289	9,576,511	5,388	201,795,941	37,453	6.16	2.83
Note: Other adjustments to 5 disability retirees occurred during the current year.									
2022-2023									
Service Retirees	2,977	$ 130,518,580	1,319	$ 56,975,835	63,262	$ 3,025,472,608	$ 47,824	7.40 %	4.58 %
Disability Retirees	32	975,193	35	990,121	1,026	32,609,569	31,783	4.22	4.83
Beneficiaries	447	17,006,956	265	8,634,721	5,219	190,086,982	36,422	8.08	4.37
Note: Other adjustments to 3 disability retirees and 3 beneficiaries occurred during the 2022-2023 fiscal year.									
2021-2022									
Service Retirees	2,731	$ 112,503,098	1,249	$ 50,727,803	61,604	$ 2,817,136,851	$ 45,730	7.18 %	4.60 %
Disability Retirees	26	830,363	32	857,886	1,032	31,289,041	30,319	3.85	4.96
Beneficiaries	431	16,682,043	308	9,278,481	5,040	175,874,217	34,896	8.11	5.43
Note: Other adjustments to 5 disability retirees and 2 beneficiaries occurred during the 2021-2022 fiscal year.									
2020-2021									
Service Retirees	2,587	$ 102,668,779	1,320	$ 51,809,696	60,122	$ 2,628,405,650	$ 43,718	3.94 %	1.75 %
Disability Retirees	44	1,224,478	31	539,059	1,043	30,129,625	28,887	3.03	1.94
Beneficiaries	430	16,073,547	273	8,114,216	4,915	162,677,085	33,098	7.86	3.32
Note: Other adjustments to 2 disability retirees and 50 beneficiaries occurred during the 2020-2021 fiscal year.									
2019-2020									
Service Retirees	2,472	$ 101,028,068	1,120	$ 41,405,854	58,855	$ 2,528,800,920	$ 42,967	2.39 %	0.04 %
Disability Retirees	56	1,554,789	43	795,175	1,032	29,243,125	28,336	1.46	0.28
Beneficiaries	370	12,637,095	238	7,157,255	4,708	150,820,748	32,035	4.24	0.74
Note: Other adjustments to 1 service retiree, 1 disability retiree, and 26 beneficiaries occurred during the 2019-2020 fiscal year.									
2018-2019									
Service Retirees	2,502	$ 98,082,129	935	$ 36,759,920	57,502	$ 2,469,681,559	$ 42,949	4.55 %	1.69 %
Disability Retirees	44	1,297,197	22	559,767	1,020	28,822,119	28,257	5.17	2.18
Beneficiaries	359	13,443,600	183	5,334,802	4,550	144,685,986	31,799	7.46	3.30
Note: Other adjustments to 5 service retirees and 7 disability retirees occurred during the 2018-2019 fiscal year.									

PEERS Schedule of Retirees and Beneficiaries Added to and Removed from Retirement Rolls

	Added to Rolls		Removed from Rolls		Rolls End of Year			% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	Average Annual Allowances	in Annual Allowance	in Average Annual Allowance
2023-2024									
Service Retirees	2,158	$ 28,387,796	982	$ 8,244,923	35,459	$ 388,518,572	$ 10,957	5.84 %	2.33 %
Disability Retirees	11	114,862	40	256,286	736	4,936,747	6,708	-1.25	2.92
Beneficiaries	236	1,812,035	145	1,004,733	2,790	20,941,465	7,506	5.31	1.50
Note: Other adjustments to 2 service retirees, 2 disability retirees, and 10 beneficiaries occurred during the current year.									
2022-2023									
Service Retirees	2,428	$ 31,209,929	1,038	$ 8,188,087	34,281	$ 367,068,390	$ 10,708	9.54 %	5.10 %
Disability Retirees	23	191,120	31	190,221	767	4,999,360	6,518	4.30	5.52
Beneficiaries	277	2,324,726	125	829,990	2,689	19,884,893	7,395	12.58	5.96
Note: Other adjustments to 1 disability retiree and 6 beneficiaries occurred during the 2022-2023 fiscal year.									
2021-2022									
Service Retirees	2,492	$ 31,119,074	1,064	$ 8,071,339	32,891	$ 335,105,022	$ 10,188	10.27 %	5.48 %
Disability Retirees	10	54,098	42	266,546	776	4,793,204	6,177	-0.40	3.83
Beneficiaries	276	1,975,900	151	1,038,394	2,531	17,662,965	6,979	9.80	4.07
Note: Other adjustments to 1 disability retiree and 7 beneficiaries occurred during the 2021-2022 fiscal year.									
2020-2021									
Service Retirees	2,326	$ 26,665,088	1,029	$ 6,928,991	31,463	$ 303,890,231	$ 9,659	7.20 %	2.79 %
Disability Retirees	19	180,395	41	149,600	809	4,812,612	5,949	0.60	3.34
Beneficiaries	257	1,900,419	138	851,511	2,399	16,086,917	6,706	11.05	3.46
Note: Other adjustments to 45 beneficiaries occurred during the 2020-2021 fiscal year.									
2019-2020									
Service Retirees	2,132	$ 24,672,435	914	$ 6,646,821	30,166	$ 283,475,672	$ 9,397	5.34 %	1.09 %
Disability Retirees	32	206,913	32	140,024	831	4,783,679	5,757	0.80	0.93
Beneficiaries	248	1,873,479	106	614,372	2,235	14,486,379	6,482	9.74	1.69
Note: Other adjustments to 1 service retiree, 1 disability retiree, and 22 beneficiaries occurred during the 2019-2020 fiscal year.									
2018-2019									
Service Retirees	2,104	$ 25,207,998	732	$ 5,118,903	28,947	$ 269,094,108	$ 9,296	8.20 %	3.07 %
Disability Retirees	45	337,905	25	148,841	832	4,745,905	5,704	5.82	3.41
Beneficiaries	179	1,332,732	94	440,834	2,071	13,200,310	6,374	9.18	3.96
Note: Other adjustments to 1 disability retiree and 14 beneficiaries occurred during the 2018-2019 fiscal year.									

PSRS Summary Plan Description

The Public School Retirement System of Missouri (PSRS) became operative July 1, 1946. It was established by an Act of the Missouri Legislature and is governed by Chapter 169 of the Revised Statutes of Missouri. Its purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability prior to retirement.

PSRS is a defined benefit plan funded on an actuarial reserve basis, which establishes the availability of funds to pay benefits as prescribed by law. The System is established as an independent trust fund and is not subject to direction by any state agency. Administrative expenses are paid entirely out of investment earnings.

Administration – The administration of PSRS is vested in a seven-member Board of Trustees, composed of three elected PSRS members, one elected Public Education Employee Retirement System of Missouri (PEERS) member, and three appointed trustees. The four elected trustees are selected by vote of the members and retirees of both Systems. Two are elected each even-numbered calendar year to serve four-year terms. The three appointed trustees, one of whom must be a PSRS or a PEERS retiree, are named by the governor to serve four-year terms. The appointed trustees must be residents of school districts included in the System but not employees of such districts nor state employees nor state elected officials.

The Board appoints an executive director who is responsible for employment of the retirement office staff, routine operation of the System, and acts as an advisor to the Board on all matters pertaining to the System.

Member Participation – PSRS membership is automatic for certificated, full-time employees of public school districts in Missouri (except the St. Louis city and the Kansas City school districts), public two-year colleges in Missouri, PSRS and certain statewide non-profit educational associations that have previously elected to join. Non-profit educational associations are no longer allowed to join the System. Certificated, part-time employees whose services would qualify them for membership in PEERS are contributing members of PSRS unless PEERS membership is elected. The vast majority of PSRS members are not covered by Social Security. However, there are a few exceptions due to specific guidance from the Social Security Administration. Those members who are also covered by Social Security contribute to PSRS at two-thirds the rate of other members and receive two-thirds benefits.

Members working in covered employment are considered active members. Such members contribute 14.5% of total retirement salary to PSRS. The contributions are deducted and remitted by the employer and are credited by PSRS to individual member accounts. Since July 1, 1989, member contributions have been tax-deferred for federal and state income tax purposes under IRC 414(h)(2). Contributions are not considered income for such purposes until they are paid as a lump-sum refund or monthly benefits.

Interest at a rate set each year by the Board of Trustees is credited to individual member accounts each June 30 on the previous June 30 balance. The interest rate, set annually by the Board, was 4.0% on June 30, 2024. Since PSRS is a defined benefit plan, benefits are based upon the member's final average salary and years of service. The amount of interest credited to a member's account has no bearing on the monthly benefit amount payable at retirement.

In addition to service earned for covered employment, members may purchase service in various categories including several types of leave, out-of-state school service, other public and private employment, active U.S. military duty, and service under the federal Uniformed Services Employment and Re-Employment Rights Act of 1994 (USERRA).

Members who have contributions on deposit with PSRS but are not working in covered employment are considered inactive members.

Employer Participation – The employers served by PSRS withhold members' contributions from salary payments and contribute an amount equal to those contributions at a current rate of 14.5% of payroll. Employer contributions and investment earnings on those funds are placed by PSRS in a general reserve account to pay monthly benefits to retirees and to beneficiaries of deceased members. Employers are responsible for remitting contributions promptly and for furnishing contribution information and new membership information to PSRS. Employers also provide needed data when members apply for monthly benefits or for refunds upon termination of employment.

Survivor Benefits – The designated beneficiary of a member who dies before retirement is eligible for a lump-sum refund of the member's contributions and interest. If the beneficiary is an eligible dependent and the member dies while in covered employment with at least two years of service, or while eligible for disability retirement benefits, monthly survivor benefits based on a percentage of the member's salary for the last full year of covered service can be elected instead of a lump-sum refund. Monthly survivor benefits may also be payable to qualified dependents of an inactive member who has at least five years of service.

In lieu of a lump-sum refund or monthly survivor benefits, survivors with an insurable interest and beneficiaries of disability retirees may elect to receive monthly benefits under the Joint-and-Survivor 100% benefit plan. Such benefits are payable when the member would have been eligible for early or normal service retirement.

Refund of Contributions – Member contributions and interest are fully refundable upon termination of covered employment or death. All service and benefit rights are forfeited upon voluntary refund or automatic termination of membership.

A member may, upon returning to covered employment, reinstate the service forfeited through termination of a previous membership by repaying the money refunded plus interest.

Membership Termination – Membership is terminated by death, retirement, refund of contributions or absence from covered employment by a non-vested member for five consecutive school years.

Disability Retirement Benefits – Disability retirement benefits are payable to eligible members who have met service and eligibility requirements and who, because of permanent disability, are unable to earn a livelihood in any occupation. In most instances, the disability retirement benefit is calculated at 50% of the member's salary for the last full year of service.

Service Retirement Benefits – Service retirement benefits are payable to members who have terminated covered employment and have met certain eligibility requirements.

Benefit Formula – All service retirement benefits are based on a formula which multiplies final average salary by the applicable benefit factor, by the years of service and, in the case of early retirement, by an age-reduction factor. Final average salary is obtained by dividing the total salaries for the three highest consecutive years of service by 36 months to arrive at a monthly average; the applicable factor is determined by the type of retirement eligibility; total service is the amount accumulated at retirement for covered employment and purchased service; and the age-reduction factor, when applicable, is determined by the age at retirement.

Normal Retirement – A member may retire with benefits calculated under the standard (2.5%) benefit factor at age 60 with five years of service, at any age with 30 years of service, or when a combination of age and service equals 80 or more. Effective August 28, 2023 members with 32 years or more of service may retire under a 2.55% benefit factor.

Early Retirement – A member may retire with benefits calculated under the standard (2.5%) formula with an age-reduction factor applied, at age 55 with five years of service or at any age with 25 years of service, as long as they do not qualify for Rule of 80.

A special provision allows members under age 55 with 25.0 to 29.9 years of service to retire with benefits calculated under a modified benefit factor ranging from 2.2% to 2.4% with no age-reduction factor applied.

Payment Options – A retiring member may choose to receive the maximum benefits payable under the Single Life benefit plan, or may elect to receive a reduced benefit under one of three Joint-and-Survivor benefit plans or under one of two Term-Certain benefit plans, to provide survivor benefit coverage in varying degrees after the retiree's death.

Certain benefit minimums apply to normal or early retirement with 15 or more years of service. The minimums for 15 but fewer than 25 years of service are reduced if a Joint-and-Survivor or a Term-Certain benefit plan is elected and/or if an age-reduction factor is applicable because of early retirement. The minimums for 25 or more years of service are reduced only if a Joint-and-Survivor or a Term-Certain benefit plan is selected.

The Partial Lump Sum Option (PLSO) is available to qualified members. This option allows qualified members to choose to have their lifetime monthly benefits actuarially reduced in exchange for the right to also receive a one-time, lump-sum payment at retirement.

Cost-of-Living Adjustments – Cost-of-living adjustments (COLAs) are provided beginning the second January after retirement to service and disability retirees, and to Joint-and-Survivor and Term-Certain beneficiaries of deceased retirees. Lifetime COLAs are limited to 80% of the original retirement benefit.

The Department of Labor Consumer Price Index for Urban Consumers (CPI-U) for the previous fiscal year is used as a guideline for the annual COLA which is set by the Board. By law, if the change in CPI-U is 2% or more, the COLA must be at least 2%, but no more than 5%. If the change in CPI-U is between 0% and 2%, the Board may grant a COLA of 0% to 5%. If the change in CPI-U is less than 0%, no increase can be given. If it is 5% or more, the Board is required to give a 5% increase. Under the funding policies adopted by the Board, the following applies:

- If the June to June change in the CPI-U is less than 2% for consecutive one-year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

Member Handbook – A ***Member Handbook*** containing detailed information concerning the retirement program is available on our website or can be obtained from the retirement office upon request.

PEERS Summary Plan Description

The Public Education Employee Retirement System of Missouri (PEERS) was established by an Act of the Missouri Legislature to begin operations on November 1, 1965, and is governed by Chapter 169 of the Revised Statutes of Missouri. Its purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability prior to retirement.

PEERS is a defined benefit plan funded on an actuarial reserve basis, which establishes the availability of funds to pay benefits as prescribed by law. The System is established as an independent trust fund and is not subject to direction by any state agency. Administrative expenses are paid entirely out of investment earnings.

Administration – The law provides that the responsibility for the operation and administration of the retirement system is vested in the Public School Retirement System of Missouri (PSRS) Board of Trustees sitting as the Board of Trustees for PEERS. The Board is comprised of three elected PSRS members, one elected PEERS member and three appointed trustees. The four elected trustees are selected by vote of the members and retirees of both Systems. Two are elected each even-numbered calendar year to serve four-year terms. The three appointed trustees, one of whom must be a PSRS or a PEERS retiree, are named by the governor to serve four-year terms. The appointed trustees must be residents of school districts included in the System but not employees of such districts nor state employees nor state elected officials.

The Board appoints an executive director who is responsible for employment of the retirement office staff, routine operation of the System, and acts as an advisor to the Board on all matters pertaining to the System.

Member Participation – PEERS membership is automatic, regardless of position, for all persons not covered by PSRS who are employed for 20 or more hours a week on a regular basis in a position that normally requires at least 600 hours during the school term by the public school districts in Missouri (except the St. Louis city and the Kansas City school districts), public two-year colleges in Missouri (except St. Louis Community College), PSRS and statewide non-profit educational associations that have elected to join.

Members working in covered employment are considered active members. Such members contribute 6.86% of their total retirement salary to PEERS. The contributions are deducted by the employer and are credited by PEERS to individual member accounts. PEERS members are also covered by Social Security.

PEERS membership can be elected by employees with Missouri educator certificates who work in any position for 17 or more hours weekly but less than full time; however, PSRS membership is automatic if a PEERS election is not made. The election to join PEERS must be filed with the Board within 90 days after entering first time, part-time employment.

Since July 1, 1989, member contributions have been tax-deferred for federal and state income tax purposes under IRC 414(h)(2). Contributions are not considered as income for federal or state income tax purposes until they are paid in a lump-sum refund or in monthly benefits.

Individual accounts are maintained for all PEERS members. Interest is credited each June 30 on the previous June 30 balance. The interest rate, set annually by the Board, was 4.0% on June 30, 2024. Since PEERS is a defined benefit plan, benefits are based upon the member's final average salary and years of service. The amount of interest credited to a member's account has no bearing on the monthly benefit amount payable at retirement.

In addition to service earned for covered employment, members may purchase service in various categories including several types of leave, out-of-state school service, other public and private employment, active U.S. military duty, and service under the federal Uniformed Services Employment and Re-employment Rights Act of 1994 (USERRA).

Members who have contributions on deposit with PEERS but are not currently working in covered employment are considered inactive members.

Employer Participation – The employers served by PEERS withhold members' contributions from salary payments and contribute an amount equal to employee contributions at a current rate of 6.86% of payroll. Employer contributions and investment earnings on those funds are placed in a general reserve account to pay monthly benefits to retirees and to beneficiaries of deceased members. It is the responsibility of the employers to remit contributions promptly and for furnishing contribution information and new membership information to PEERS. Employers also provide needed data when members apply for benefits or refund of contributions upon termination of employment.

Survivor Benefits – When a member dies before retirement, the designated beneficiary becomes eligible for a lump-sum refund of the employee's contributions and interest. In lieu of a lump-sum refund, survivors with an insurable interest and beneficiaries of disability retirees may elect to receive monthly benefits under the Joint-and-Survivor 100% benefit plan. Such benefits are payable when the member would have been eligible for early or normal service retirement.

Refund of Contributions – Member contributions and interest are fully refundable upon termination of covered employment or death. All service and benefit rights are forfeited upon voluntary refund or automatic termination of membership.

A member may, upon returning to covered employment, reinstate the service forfeited through termination of a previous membership by repaying the money refunded plus interest.

Membership Termination – Membership is terminated by death, retirement, refund of contributions or absence from covered employment by a non-vested member for five consecutive school years.

Disability Retirement Benefits – Disability retirement benefits are payable to members who have met service and eligibility requirements and who, because of permanent disability, are unable to earn a livelihood in any occupation. The disability retirement benefit is calculated at 90% of the normal service retirement benefit.

Service Retirement Benefits – Service retirement benefits are payable to members who have terminated covered employment and who have met certain eligibility requirements.

Benefit Formula – All service retirement benefits are based on a formula which multiplies final average salary by the applicable benefit factor, by the years of service and, in the case of early retirement, by an age-reduction factor. Final average salary is obtained by dividing the total salaries for the three highest consecutive years of service by 36 months to arrive at a monthly average; the applicable factor is determined by the type of retirement

eligibility; total service is the amount accumulated at retirement for covered employment and purchased service; and the age-reduction factor, when applicable, is determined by the age at retirement.

Because of the conversion of the System from a formula integrated with Social Security to the present basis, a special "frozen benefit" is in effect for certain members for service prior to July 1, 1973.

Normal Retirement – A member may retire with benefits calculated under the standard (1.61%) formula at age 60 with five years of service, at any age with at least 30 years of service, and at the point where the member's age plus service equals 80 or more (Rule of 80). A member may retire under the standard (1.61%) formula when the member qualifies for Rule of 80 or 30-and-Out and will receive an additional 0.8% multiplier until reaching minimum eligibility age for Social Security benefits (currently age 62).

Early Retirement – A member may retire with benefits calculated under the standard (1.61%) formula with an age-reduction factor applied at age 55 with five years of service, or at any age with 25 years of service, as long as they do not qualify for Rule of 80.

A special provision allows members under age 55 with 25.0 to 29.9 years of service to retire with benefits calculated under a modified benefit factor ranging from 1.51% to 1.59% with no age-reduction factor applied.

Payment Options – A retiring member may choose to receive the maximum benefits payable under the Single Life benefit plan, or may choose to receive a reduced benefit under one of three Joint-and-Survivor benefit plans or under one of two Term-Certain benefit plans, to provide survivor benefit coverage in varying degrees after the retiree's death.

Another option, the Accelerated Payment Plan (APP), allows members to receive a higher PEERS benefit prior to minimum Social Security eligibility age (currently age 62). When the minimum Social Security eligibility age is attained, the member's PEERS benefit is reduced and remains at a reduced level for the remainder of their retirement.

The Partial Lump Sum Option (PLSO) is available to qualified members. This option allows qualified members to choose to have their lifetime monthly benefits actuarially reduced in exchange for the right to also receive a one-time, lump-sum payment at retirement.

Cost-of-Living Adjustments – Cost-of-living adjustments (COLAs) are provided starting the fourth January after retirement to service and disability retirees, and to Joint-and-Survivor and Term-Certain beneficiaries of deceased retirees. Lifetime COLAs are limited to 80% of the original retirement benefit.

The Department of Labor Consumer Price Index for Urban Consumers (CPI-U) for the previous fiscal year is used as a guideline for the annual COLA which is set by the Board of Trustees. By law, if the change in CPI-U is 2% or more, the COLA must be at least 2%, but no more than 5%. If the change in CPI-U is between 0% and 2%, the Board may grant a COLA of 0% to 5%. If the change in CPI-U is less than 0%, no increase can be given. If it is 5% or more, the Board is required to give a 5% increase. Under the funding policies adopted by the Board, the following applies:

- If the June to June change in the CPI-U is less than 2% for consecutive one-year periods, a cost-of-living increase of 2% will be granted when the cumulative increase is equal to or greater than 2%, at which point the cumulative increase in the CPI-U will be reset to be based on the June value immediately preceding the January 1 at which the 2% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2%, but less than 5%, a cost-of-living increase of 2% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5%, a cost-of-living increase of 5% will be granted.

Member Handbook – A ***Member Handbook*** containing detailed information concerning the retirement program is available on our website or can be obtained from the retirement office upon request.

PSRS and PEERS Summary of Actuarial Assumptions and Methods

The Board is responsible for the adoption of the Systems' Funding Policies and assumptions. A summary of the current Funding Policies is included in the Certification of Actuarial Results.

The actuarial assumptions and methods utilized for funding and financial reporting purposes differ slightly. The primary difference between the two methods is the fact that financial reporting requires the recognition of investment gains at market with no smoothing.

Inflation

Inflation is assumed to be 2.00% per annum. (effective 6/30/21)

Payroll Growth

Total payroll growth for PSRS is assumed to be 2.25% per annum, consisting of 2.00% inflation, 0.125% real wage growth due to the inclusion of active health care costs in pension earnings, and 0.125% of real wage growth due to productivity. (effective 6/30/21)

Total payroll growth for PEERS is assumed to be 2.50% per annum, consisting of 2.00% inflation, 0.25% real wage growth due to the inclusion of active health care costs in pension earnings, and 0.25% of real wage growth due to productivity. (effective 6/30/21)

Individual Salary Growth

PSRS

Individual salaries are assumed to increase each year with inflation of 2.00%, real wage growth generated by the cost of active health care of 0.125% (since health care costs are included in pension earnings), real wage growth due to productivity of 0.125%, and additional real salary growth for merit, promotion, and seniority. (effective 6/30/21)

PSRS – Salary Growth

Service	Inflation	Health Care Cost	Productivity	Merit, Promotion, Seniority	Total Individual Salary Growth
0	2.00%	0.125%	0.125%	6.625%	8.875%
1	2.00%	0.125%	0.125%	3.325%	5.575%
2	2.00%	0.125%	0.125%	2.775%	5.025%
3	2.00%	0.125%	0.125%	2.666%	4.916%
4	2.00%	0.125%	0.125%	2.557%	4.807%
5	2.00%	0.125%	0.125%	2.447%	4.697%
6	2.00%	0.125%	0.125%	2.338%	4.588%
7	2.00%	0.125%	0.125%	2.229%	4.479%
8	2.00%	0.125%	0.125%	2.120%	4.370%
9	2.00%	0.125%	0.125%	2.010%	4.260%
10	2.00%	0.125%	0.125%	1.901%	4.151%
11	2.00%	0.125%	0.125%	1.792%	4.042%
12	2.00%	0.125%	0.125%	1.683%	3.933%
13	2.00%	0.125%	0.125%	1.573%	3.823%
14	2.00%	0.125%	0.125%	1.464%	3.714%
15	2.00%	0.125%	0.125%	1.355%	3.605%
16	2.00%	0.125%	0.125%	1.285%	3.535%
17	2.00%	0.125%	0.125%	1.215%	3.465%
18	2.00%	0.125%	0.125%	1.145%	3.395%
19	2.00%	0.125%	0.125%	1.075%	3.325%
20	2.00%	0.125%	0.125%	1.005%	3.255%
21	2.00%	0.125%	0.125%	0.935%	3.185%
22	2.00%	0.125%	0.125%	0.865%	3.115%
23	2.00%	0.125%	0.125%	0.795%	3.045%
24	2.00%	0.125%	0.125%	0.725%	2.975%
25	2.00%	0.125%	0.125%	0.655%	2.905%
26	2.00%	0.125%	0.125%	0.585%	2.835%
27	2.00%	0.125%	0.125%	0.515%	2.765%
28	2.00%	0.125%	0.125%	0.445%	2.695%
29	2.00%	0.125%	0.125%	0.375%	2.625%
30+	2.00%	0.125%	0.125%	0.375%	2.625%

PEERS

Individual salaries are assumed to increase each year with inflation of 2.00%, real wage growth generated by the cost of active health care of 0.25% (since health care costs are included in pension earnings), real wage growth due to productivity of 0.25%, and additional real salary growth for merit, promotion, and seniority. (effective 6/30/21)

PEERS – Salary Growth					
Service	Inflation	Health Care Cost	Productivity	Merit, Promotion, Seniority	Total Individual Salary Growth
0	2.00%	0.25%	0.25%	7.25%	9.75%
1	2.00%	0.25%	0.25%	3.25%	5.75%
2	2.00%	0.25%	0.25%	2.75%	5.25%
3	2.00%	0.25%	0.25%	2.55%	5.05%
4	2.00%	0.25%	0.25%	2.35%	4.85%
5	2.00%	0.25%	0.25%	2.15%	4.65%
6	2.00%	0.25%	0.25%	2.00%	4.50%
7	2.00%	0.25%	0.25%	1.85%	4.35%
8	2.00%	0.25%	0.25%	1.75%	4.25%
9	2.00%	0.25%	0.25%	1.65%	4.15%
10	2.00%	0.25%	0.25%	1.55%	4.05%
11	2.00%	0.25%	0.25%	1.45%	3.95%
12	2.00%	0.25%	0.25%	1.35%	3.85%
13	2.00%	0.25%	0.25%	1.25%	3.75%
14	2.00%	0.25%	0.25%	1.20%	3.70%
15	2.00%	0.25%	0.25%	1.15%	3.65%
16	2.00%	0.25%	0.25%	1.10%	3.60%
17	2.00%	0.25%	0.25%	1.05%	3.55%
18	2.00%	0.25%	0.25%	1.00%	3.50%
19	2.00%	0.25%	0.25%	0.95%	3.45%
20	2.00%	0.25%	0.25%	0.90%	3.40%
21	2.00%	0.25%	0.25%	0.85%	3.35%
22	2.00%	0.25%	0.25%	0.80%	3.30%
23+	2.00%	0.25%	0.25%	0.75%	3.25%

Investment Return

It is assumed that investments of the Systems will return a yield of 7.30% per annum, net of system expenses (investment and administrative). (effective 6/30/21)

Cost-of-Living Adjustments

The Board's cost-of-living adjustment policy is as follows:

- If the June to June change in the CPI-U is less than 2.00% for consecutive one-year periods, a cost-of-living increase of 2.00% will be granted when the cumulative increase is equal to or greater than 2.00%, at which point the cumulative increase in the CPI-U will be reset to zero. For the following year, the starting CPI-U will be based on the June value immediately preceding the January 1 at which the 2.00% cost-of-living increase is granted.
- If the June to June change in the CPI-U is greater than or equal to 2.00%, but less than 5.00%, a cost-of-living increase of 2.00% will be granted.
- If the June to June change in the CPI-U is greater than or equal to 5.00%, a cost-of-living increase of 5.00% will be granted.

The actuarial assumption assumed 2.0% for January 1, 2022, January 1, 2023 and January 1, 2024, and then 1.35% for all years thereafter.

The COLA applies to service retirements and beneficiary annuities. The COLA does not apply to the benefits for in-service death payable to spouses (where the spouse is over age 60), and does not apply to the spouse with children pre-retirement death benefit, the dependent children pre-retirement death benefit, or the dependent parent death benefit. The total lifetime COLA cannot exceed 80% of the original benefit. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of valuation. (effective 6/30/21)

Mortality Rates

Active Member Mortality

PSRS

Mortality rates for PSRS active members are based on experience-adjusted PubT-2010 (Teachers) base mortality table for employees with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.10 at all ages for males and 1.04 at all ages for females. The Plan-specific experience adjustments are equivalent to the experience adjustment factors used for the retiree mortality rates. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PSRS Active Member Mortality

Age	Male	Female
20	0.380	0.144
30	0.314	0.186
40	0.543	0.356
50	1.150	0.729
60	3.031	1.758
70	7.345	4.608

PEERS

Mortality rates for PEERS active members are based on experience-adjusted PubG-2010 (B) (General Employees, Below-Median Income) base mortality table for employees with generational projection using the MP-2020 improvement scale, multiplied by an adjustment factor of 1.13 at all ages for males and 0.94 at all ages for females. The Plan-specific experience adjustments are equivalent to the experience adjustment factors used for the retiree mortality rates. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PEERS Active Member Mortality

Age	Male	Female
20	0.470	0.130
30	0.760	0.228
40	1.277	0.488
50	2.319	0.965
60	5.494	2.348
70	10.908	5.384

Service Retiree Mortality

PSRS

Mortality rates for PSRS non-disabled retirees are based on experience-adjusted PubT-2010 (Teachers, Amount-Weighted) base mortality table for healthy retirees with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.10 at all ages for males and 1.04 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PSRS Non-Disabled Retiree Mortality

Age	Male	Female
40	0.543	0.346
50	1.150	0.729
60	4.098	3.134
70	11.085	7.316
80	39.441	27.929
90	139.533	101.816
100	346.404	285.220
110	543.543	491.628

PEERS

Mortality rates for PEERS non-disabled retirees are based on experience-adjusted PubG-2010(B)(General Employees, Below-Median Income, Amount-Weighted) base mortality table for healthy retirees with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.13 at all ages for males and 0.94 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PEERS Non-Disabled Retiree Mortality

Age	Male	Female
40	1.277	0.488
50	7.670	3.790
60	12.769	5.259
70	22.199	10.211
80	62.227	32.768
90	175.692	110.953
100	355.852	257.795
110	558.367	444.356

Beneficiary and Survivor Mortality

PSRS

Mortality rates for PSRS beneficiaries and survivors are based on experience-adjusted Pub-2010 (Amount-Weighted) base mortality table for contingent survivors with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.18 at all ages for males and 1.07 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PSRS Beneficiary and Survivor Mortality		
Age	**Male**	**Female**
40	0.583	0.366
50	7.788	3.287
60	12.460	6.987
70	23.659	13.226
80	58.963	36.434
90	162.753	117.627
100	371.597	293.448
110	583.073	505.809

PEERS

Mortality rates for PEERS beneficiaries and survivors are based on experience-adjusted Pub-2010(B) (General Employees, Below-Median Income, Amount-Weighted) base mortality table for contingent survivors with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.01 at all ages for males and 1.07 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PEERS Beneficiary and Survivor Mortality		
Age	**Male**	**Female**
40	1.141	0.555
50	8.663	5.516
60	13.099	10.345
70	23.551	17.440
80	55.798	43.418
90	146.001	125.260
100	318.062	293.448
110	499.071	505.809

Disability Retiree Mortality

PSRS

Mortality rates for PSRS disabled retirees are based on experience-adjusted PubT-2010 (Teachers) base mortality table for disabled retirees with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.10 at all ages for males and 1.04 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PSRS Disability Retiree Mortality		
Age	**Male**	**Female**
40	8.348	7.221
50	16.622	14.806
60	28.728	21.355
70	40.412	27.194
80	75.352	59.536
90	171.028	137.904
100	346.404	285.220
110	543.543	491.628

PEERS

Mortality rates for PEERS disabled retirees are based on experience-adjusted PubG-2010 (General Employees) base mortality table for disabled retirees with generational projection using the MP-2020 improvement scale multiplied by an adjustment factor of 1.13 at all ages for males and 0.94 at all ages for females. Illustrative rates per 1,000 members at various ages are as follows (effective 6/30/21):

PEERS Disability Retiree Mortality		
Age	**Male**	**Female**
40	8.576	6.526
50	17.075	13.383
60	29.511	19.302
70	41.514	24.579
80	77.407	53.811
90	175.692	124.644
100	355.852	257.795
110	558.367	444.356

Retirement Rates

Retirement is assumed in accordance with the following rates per 1,000 eligible members (rates were effective 6/30/23 for PSRS and 6/30/21 for PEERS):

PSRS Active Member Retirement

	Years of Service												
Age	<=20	21	22	23	24	25	26	27	28	29	30	31	>=32
<=50	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	3.00 %	3.00 %	3.00 %	3.00 %	30.00 %	15.00 %	40.00 %
51	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	3.00 %	3.00 %	3.00 %	15.00 %	30.00 %	15.00 %	40.00 %
52	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	3.00 %	3.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
53	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	3.00 %	27.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
54	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	28.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
55	5.00 %	3.00 %	3.00 %	3.00 %	3.00 %	39.00 %	18.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
56	5.00 %	3.00 %	3.00 %	3.00 %	40.00 %	19.00 %	18.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
57	5.00 %	3.00 %	3.00 %	40.00 %	20.00 %	19.00 %	18.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
58	5.00 %	3.00 %	40.00 %	20.00 %	20.00 %	19.00 %	18.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
59	5.00 %	40.00 %	20.00 %	20.00 %	20.00 %	19.00 %	18.00 %	17.00 %	16.00 %	15.00 %	30.00 %	15.00 %	40.00 %
60	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	15.00 %	40.00 %
61	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	15.00 %	40.00 %
62	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	15.00 %	40.00 %
63	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	15.00 %	40.00 %
64	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	15.00 %	40.00 %
65	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	45.00 %	45.00 %	45.00 %	45.00 %	45.00 %	30.00 %	15.00 %	40.00 %
66	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	15.00 %	40.00 %
67	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	15.00 %	40.00 %
68	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	15.00 %	40.00 %
69	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	15.00 %	40.00 %
>=70	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

PEERS Active Member Retirement

	Years of Service										
Age	<=20	21	22	23	24	25	26	27	28	29	>=30
<50	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	5.00 %	5.00 %	5.00 %	5.00 %	30.00 %
50	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	5.00 %	5.00 %	5.00 %	5.00 %	20.00 %
51	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	5.00 %	5.00 %	5.00 %	30.00 %	20.00 %
52	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %
53	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %
54	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %	20.00 %
55	5.00 %	5.00 %	5.00 %	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
56	5.00 %	5.00 %	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
57	5.00 %	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
58	5.00 %	5.00 %	30.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
59	5.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
60	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %
61	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %	10.00 %
62	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
63	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
64	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
65	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %
66	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %	30.00 %
67	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %
68	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %
69	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %
70	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %
71	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %	25.00 %
72	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
73	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
74	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %	20.00 %
>=75	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death, disability or retirement is assumed in accordance with the following illustrative rates per 1,000 members: (effective 6/30/16):

PSRS Active Member Withdrawal		PEERS Active Member Withdrawal	
Years of Service	Rate	Years of Service	Rate
0	240.0	0	350.0
1	115.0	1	230.0
2	100.0	2	180.0
3	80.0	3	150.0
4	70.0	4	125.0
5	60.0	5	100.0
10	28.0	10	55.0
15	15.0	15	33.0
20	10.0	20	18.0
25+	0.0	25+	0.0

Refund of Contributions

Active members who terminate employment with less than five years of service and inactive members with less than five years of service are assumed to take an immediate refund of their contributions.

Active members who terminate employment with five or more years of service, but prior to satisfying the age and service requirements for service retirement, and inactive members with five or more years of service are assumed to select the option that has the greater present value between an immediate refund of their contributions and a life annuity deferred to their earliest retirement age. (effective 6/30/16)

Active members who terminate employment with five or more years of service and satisfy the age and service requirements for service retirement upon termination, and inactive members with five or more years of service and currently eligible for service retirement are assumed to select an immediate life annuity. (effective 6/30/16)

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

PSRS Active Member Disability (effective 6/30/21)		PEERS Active Member Disability (effective 6/30/16)	
Age	Rates	Age	Rates
25	0.0017%	25	0.0017%
30	0.0080%	30	0.0080%
35	0.0220%	35	0.0160%
40	0.0480%	40	0.0320%
45	0.0880%	45	0.0640%
50	0.1290%	50	0.1220%
55	0.1660%	55	0.2100%

Interest on Member Accounts

1.00% per annum (effective 6/30/21)

Service Purchases

A 0.75% load for PSRS (effective 6/30/21) and a 1.50% load for PEERS (effective 6/30/16) is added to the Normal Cost to account for anticipated losses resulting from service purchases and reinstatements.

Provisions for Expenses

There is no specific provision for expenses. The implicit assumption is that investment and administrative expenses are paid from investment income in excess of 7.3% per annum. (effective 6/30/21)

Dependent Assumptions

(effective 6/30/16)

- **Marriage Assumptions (Pre-retirement)** 70% of male and female members are assumed to be married. Beneficiaries are assumed to be of the opposite sex from the member. Male spouses are assumed to be two years older than female spouses.
- **Beneficiary Assumptions (Post-retirement)** Retired members, regardless of gender, are assumed to be three years older than their joint annuitant.

Survivor Benefits (Pre-retirement PSRS Only)

All active members under age 50 are assumed to have two dependent children. Each child is assumed to receive payments of $860 per month for 18 years if the member is under age 32 and grading down to zero years if the member is age 50. (effective 6/30/16)

Return of Unused Member Account Balance

A cash refund feature is included in the valuation of annuity benefits to reflect that cumulative annuity payments to members may not be less than the amount of contributions paid by the member. (effective 6/30/16)

Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. (1947)

Asset Valuation Method

The Actuarial Value of Assets is a smoothed value of assets. The actuarial value at June 30 of the prior year is projected by increasing the amount by 7.3% interest, adding contributions with 7.3% interest for half the year, and subtracting benefit payments for half the year. Twenty percent of the difference between the actual returns at fair value for the year and expected return from the projection of the prior year actuarial value, along with corresponding amounts from each of the prior four years is added to the actuarial value. The Actuarial Value of Assets was reset to fair value at June 30, 2003. The methodology remains unchanged. (1994)

Amortization of Unfunded Actuarial Accrued Liability

Gains and losses occurring from census experience different than assumed and assumption changes are amortized over a 30-year period as a level percent of payroll. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities. Increases in the Actuarial Accrued Liability caused by changes in the benefit provisions are amortized over 20 years.

The method for amortizing the unfunded Actuarial Accrued Liability was changed from a rolling 30-year method to the closed 30-year method described above effective June 30, 2011.

For accounting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants (active and inactive). Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

NOTE: *Dates reflect the effective date as adopted by the Board of Trustees.*

Evolve

To evolve is to grow; to grow is to succeed

As the world in which we work evolves, we must evolve with it to stay successful, secure and relevant.

Each school year we welcome a new group of young professionals to our membership ranks and congratulate a new group of retirees as they begin their next chapter. Our continuing evolution means we are always searching for ways to improve our technology, service, communications and investment strategies to best serve both their current and future needs.

Statistical Section

Statistical Summary

Benefit Recipients

The largest percentage of the Systems' benefit recipients are service retirees. Service retirement benefits are payable to members who have met age and service requirements. The number of PSRS service retirees on the payment rolls increased by 1,547 from 63,262 at June 30, 2023 to 64,809 at June 30, 2024. The number of PEERS service retirees on the payment rolls increased by 1,178 from 34,281 at June 30, 2023 to 35,459 at June 30, 2024.

Disability benefits in PSRS and PEERS are paid to members who are unable to earn a livelihood due to permanent disability and who have met certain eligibility requirements. The number of PSRS disability retirees on the payment rolls decreased by 7 from 1,026 at June 30, 2023 to 1,019 at June 30, 2024. The number of PEERS disability retirees on the payment rolls decreased by 31 from 767 at June 30, 2023 to 736 at June 30, 2024.

In both PSRS and PEERS, beneficiary payments are available to survivors if the retiree elected this option. Three Joint-and-Survivor benefit plans and two Term-Certain benefit plans are available. In PSRS, survivor benefits are also available to designated beneficiaries of members who die before retirement.

The charts on page 132 detail the number of benefit recipients by type and monthly benefit amount for each System.

Pension Funding

An unfunded actuarial accrued liability (UAAL) for pension benefits generally represents the difference between the present value of all benefits estimated to be payable to plan members as a result of their age, salary, and service through the valuation date and the actuarial value of plan assets available to pay those benefits. This amount changes over time as a result of changes in accrued benefits, pay levels, rates of return on investments, changes in actuarial assumptions, and changes in the demographics of the employee base. Each year an external actuary performs a valuation to determine the present value of the benefits payable (actuarial accrued liability) and compares this to the assets available to arrive at the funded status of the Systems.

The charts on page 140 show a comparison of the assets and liabilities of the Systems over time. At June 30, 2024, PSRS was 87.2% pre-funded and PEERS was 88.1% pre-funded. At June 30, 2023, PSRS was 85.9% pre-funded and PEERS was 87.3% pre-funded. Detailed information on actuarial results and assumptions can be found in the *Actuarial Section* of this report.

Changes in Net Position

The charts on page 133 detail a 10-year history of the additions (revenue) and deductions (expenses) of the Systems.

Other charts in this section detail demographic information concerning our members and employers.

The data in this section was derived from internal sources and the annual actuarial valuation reports.

PSRS Summary of Benefit Recipients By Type As of June 30, 2024

Amount of Monthly Benefit	Service Retirement	Disability Retirement	Beneficiary Recipients				Total
			Disability	Survivors	Beneficiary	Term-Certain	
<$1,000	5,149	10	246	377	309	4	6,095
$1,000 - $1,999	6,372	183	154	165	609	8	7,491
$2,000 - $2,999	8,329	507	49	82	832	3	9,802
$3,000 - $3,999	12,650	228	9	73	825	6	13,791
$4,000 - $4,999	12,584	75	3	51	630	3	13,346
$5,000 - $5,999	9,205	12	1	24	438	2	9,682
$6,000+	10,520	4	—	32	451	2	11,009
Total	64,809	1,019	462	804	4,094	28	71,216

PEERS Summary of Benefit Recipients By Type As of June 30, 2024

Amount of Monthly Benefit	Service Retirement	Disability Retirement	Beneficiary Recipients				Total
			Disability	Survivors*	Beneficiary	Term-Certain	
<$500	14,793	402	288	—	1,244	18	16,745
$500 - $999	9,080	238	83	—	645	7	10,053
$1,000 - $1,999	8,154	93	15	—	379	8	8,649
$2,000 - $2,999	2,277	3	1	—	79	1	2,361
$3,000 - $3,999	718	—	—	—	17	—	735
$4,000+	437	—	—	—	5	—	442
Total	35,459	736	387	—	2,369	34	38,985

* Benefit not available in PEERS.

PSRS Schedule of Changes in Fiduciary Net Position, Last 10 Fiscal Years

(Dollar amounts in thousands)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Additions by source										
Member contributions	$ 689,187	$ 704,786	$ 719,625	$ 726,996	$ 747,403	$ 757,917	$ 779,834	$ 807,546	$ 832,155	$ 858,834
Employer contributions	656,925	670,794	684,858	696,970	712,545	724,995	745,638	764,348	792,647	819,926
Investment income	1,447,144	533,174	4,104,110	3,173,732	2,595,859	1,457,327	11,291,593	(1,451,317)	2,842,458	5,020,947
Other income	26	6	13	4	6	192	128	54	64	22
Total additions by source	2,793,282	1,908,760	5,508,606	4,597,702	4,055,813	2,940,431	12,817,193	120,631	4,467,324	6,699,729
Deductions by type										
Monthly benefits										
Service retirement	2,102,511	2,203,773	2,288,945	2,360,945	2,460,422	2,542,672	2,620,432	2,768,923	2,976,669	3,140,702
Service retirement -PLSO	37,191	32,365	34,721	37,754	33,751	39,628	38,966	35,448	39,882	33,192
Disability	23,447	25,309	26,379	27,235	27,826	29,373	30,020	30,676	31,982	33,122
Beneficiary	107,109	114,829	121,170	129,722	138,978	147,053	155,194	167,794	181,167	194,282
Lump-sum refunds										
Death	7,712	9,078	8,504	8,879	9,471	10,351	10,566	12,879	12,820	11,179
Withdrawal/transfers	48,226	45,553	42,114	42,450	39,825	44,155	40,982	42,696	49,790	58,670
Administrative expenses/other	10,015	11,563	10,497	11,418	11,326	10,653	10,818	11,680	12,961	13,332
Total deductions by type	2,336,211	2,442,470	2,532,330	2,618,403	2,721,599	2,823,885	2,906,978	3,070,096	3,305,271	3,484,479
Changes in plan net position	$ 457,071	$ (533,710)	$2,976,276	$1,979,299	$1,334,214	$ 116,546	$9,910,215	$(2,949,465)	$1,162,053	$3,215,250

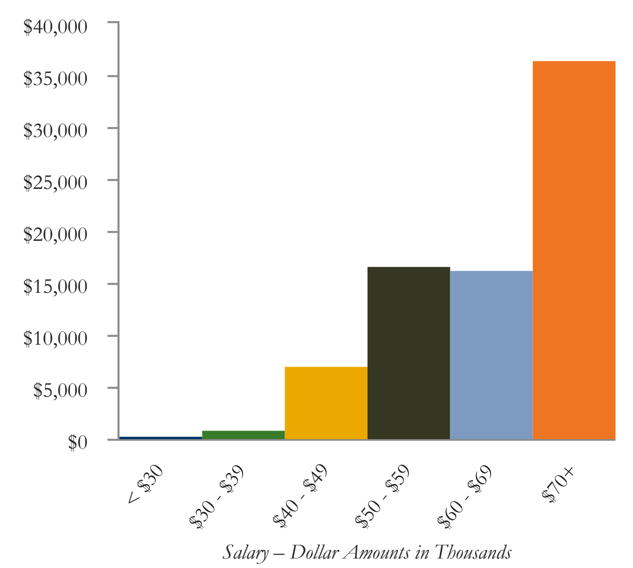
PEERS Schedule of Changes in Fiduciary Net Position, Last 10 Fiscal Years

(Dollar amounts in thousands)

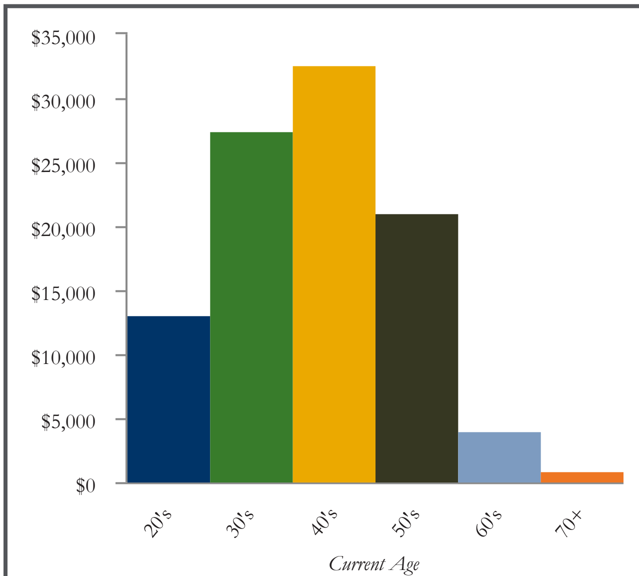
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Additions by source										
Member contributions	$ 110,444	$ 114,258	$ 118,447	$ 121,468	$ 126,609	$ 131,336	$ 134,324	$ 144,215	$ 156,402	$ 169,864
Employer contributions	103,624	106,717	111,240	115,103	120,042	124,545	126,877	135,181	147,464	162,778
Investment income	163,718	60,317	485,047	381,524	319,773	181,855	1,431,017	(189,301)	373,198	667,097
Other income	2	—	—	—	—	—	—	—	4	—
Total additions by source	377,788	281,292	714,734	618,095	566,424	437,736	1,692,218	90,095	677,068	999,739
Deductions by type										
Monthly benefits										
Service retirement	195,980	212,327	229,599	246,062	266,172	283,100	300,571	327,469	359,941	385,151
Service retirement -PLSO	6,576	4,410	6,585	7,274	8,138	7,849	8,870	9,722	10,548	10,323
Disability	3,917	4,158	4,313	4,453	4,621	4,817	4,817	4,769	4,901	4,953
Beneficiary	8,769	9,791	10,581	11,575	12,637	13,892	15,164	16,667	18,519	20,292
Lump-sum refunds										
Death	1,418	1,159	1,266	1,075	1,123	1,763	1,998	2,279	1,830	2,121
Withdrawal/transfers	18,410	18,546	16,925	17,195	17,551	18,917	19,101	21,055	23,533	22,113
Administrative expenses/other	5,629	6,981	6,377	7,113	7,424	7,078	7,379	7,706	8,653	9,372
Total deductions by type	240,699	257,372	275,646	294,747	317,666	337,416	357,900	389,667	427,925	454,325
Changes in plan net position	$ 137,089	$ 23,920	$ 439,088	$ 323,348	$ 248,758	$ 100,320	$1,334,318	$ (299,572)	$ 249,143	$ 545,414

PSRS Summary of Changes in Membership During 2023 2024		Male	Female	Total
Membership July 1, 2023		21,886	77,246	99,132
New members added		1,254	3,982	5,236
Less:	Service retirements	679	2,147	2,826
	Disability retirements	3	21	24
	Withdrawals	483	1,539	2,022
	Deaths	27	42	69
		1,192	3,749	4,941
	Other	(7)	(11)	(18)
Net change in membership 2023-2024		55	222	277
Membership June 30, 2024		21,941	77,468	99,409

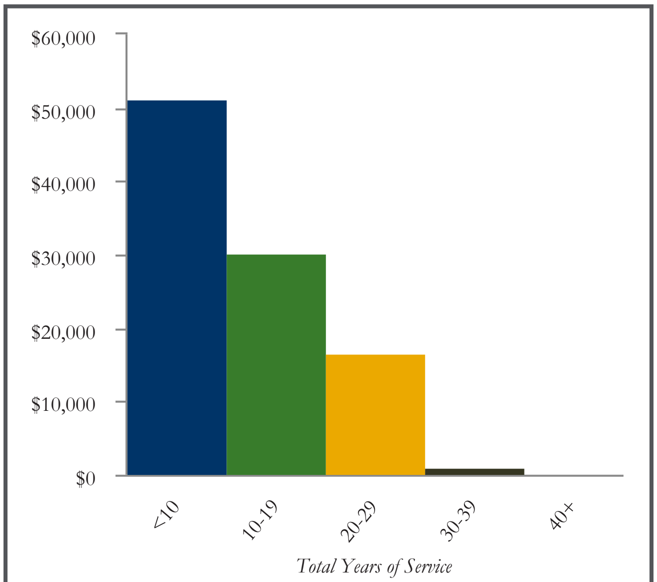
2023 2024 PSRS Members by Annual Salary



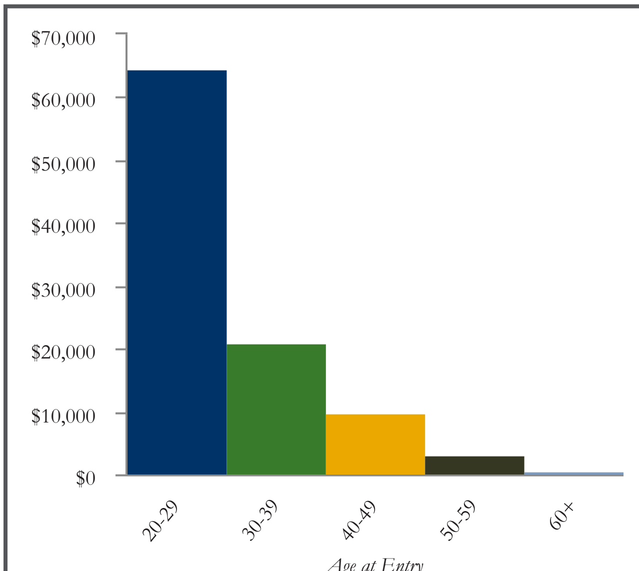
2023 2024 PSRS Members by Current Age



2023 2024 PSRS Members by Total Years of Service



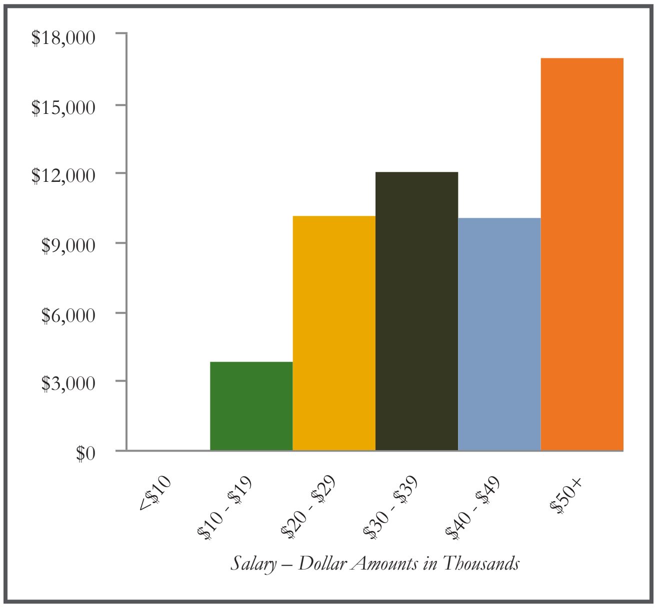
2023 2024 PSRS Member Age at Entry Into System



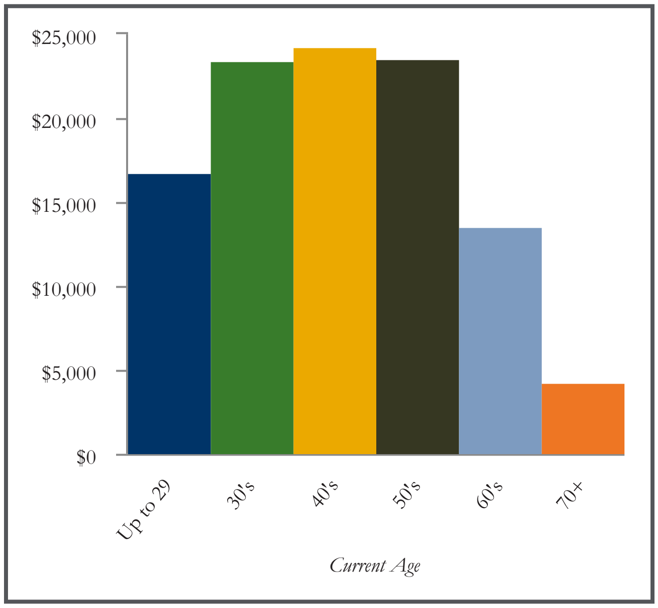
PEERS Summary of Changes in Membership During 2023 2024

		Male	Female	Total
Membership July 1, 2023		27,284	73,434	100,718
New members added		3,329	8,614	11,943
Less:	Service retirements	525	1,633	2,158
	Disability retirements	5	6	11
	Withdrawals	1,261	3,028	4,289
	Deaths	67	99	166
		1,858	4,766	6,624
	Other	(6)	(25)	(31)
Net change in membership 2023-2024		1,465	3,823	5,288
Membership June 30, 2024		28,749	77,257	106,006

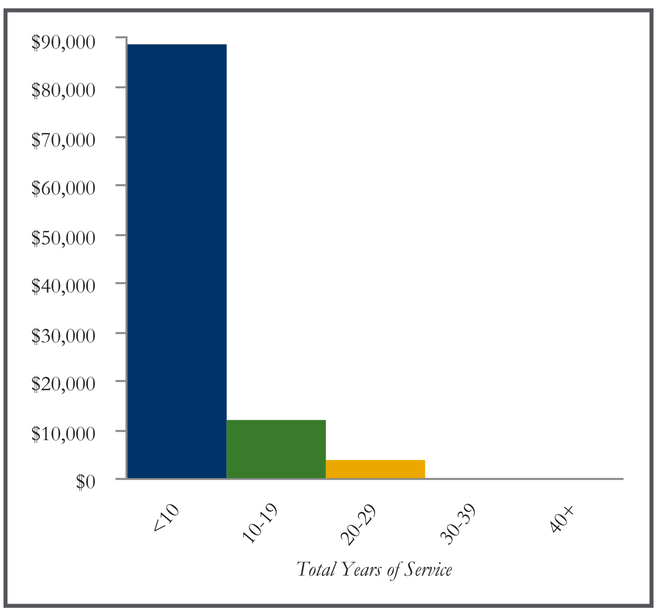
2023 2024 PEERS Members by Annual Salary



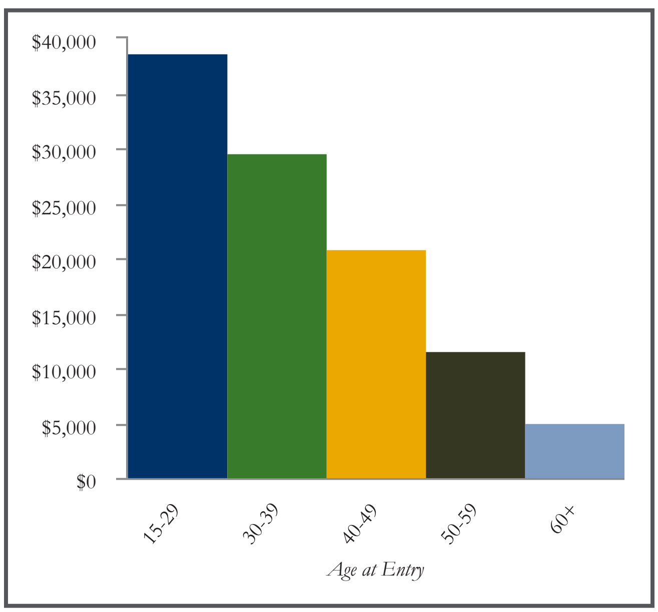
2023 2024 PEERS Members by Current Age



2023 2024 PEERS Members by Total Years of Service

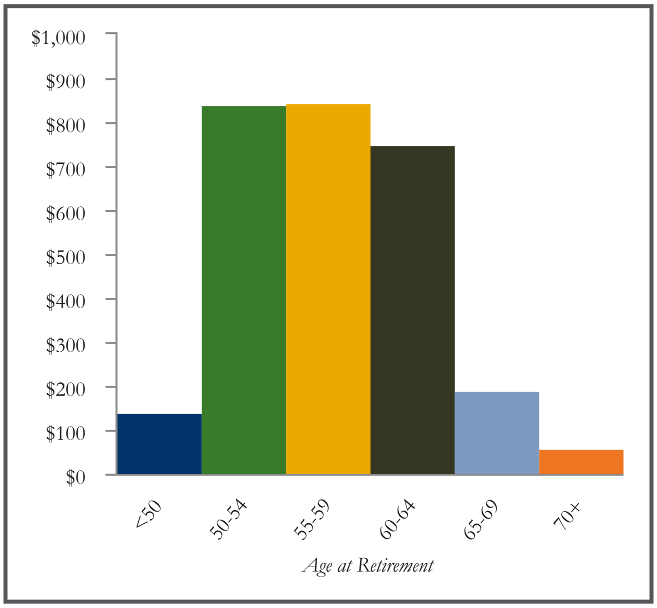


2023 2024 PEERS Member Age at Entry Into System

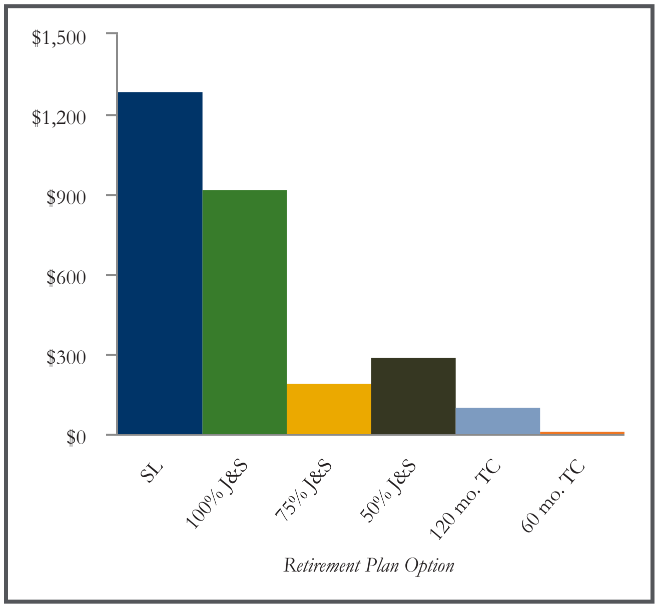


PSRS 2023 2024 New Service Retirees	Service Retirees	Disability Retirees	Beneficiaries
Retirees July 1, 2023	63,262	1,026	5,219
Added during the Year	2,826	24	458
Died during the Year	(1,279)	(26)	(274)
Other	0	(5)	(15)
Retirees June 30, 2024	64,809	1,019	5,388

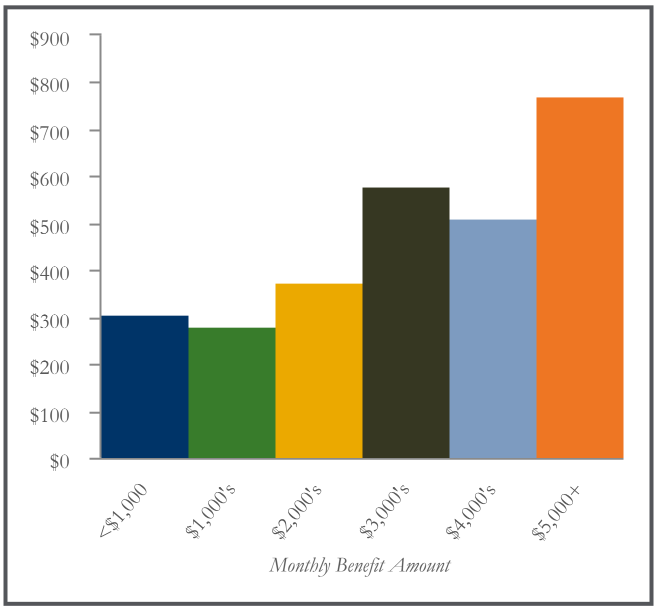
2023 2024 PSRS New Service Retirees by Age at Retirement



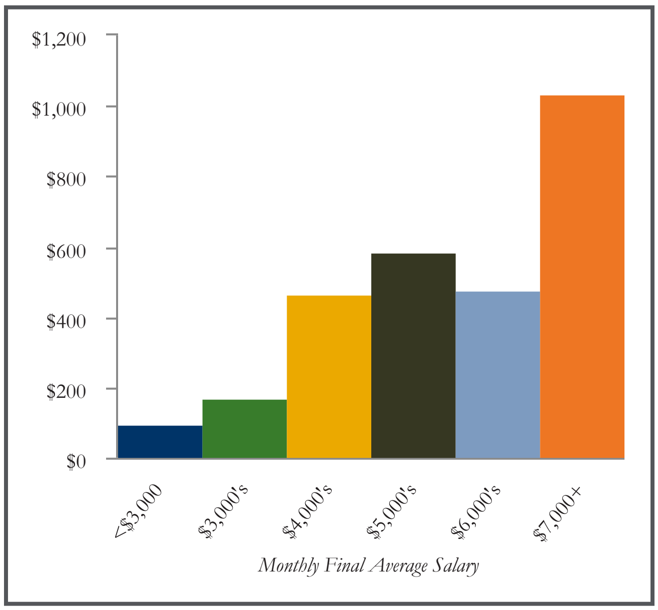
2023 2024 PSRS New Service Retirees by Retirement Plan Option



2023 2024 PSRS New Service Retirees by Single Life Monthly Benefit Amount



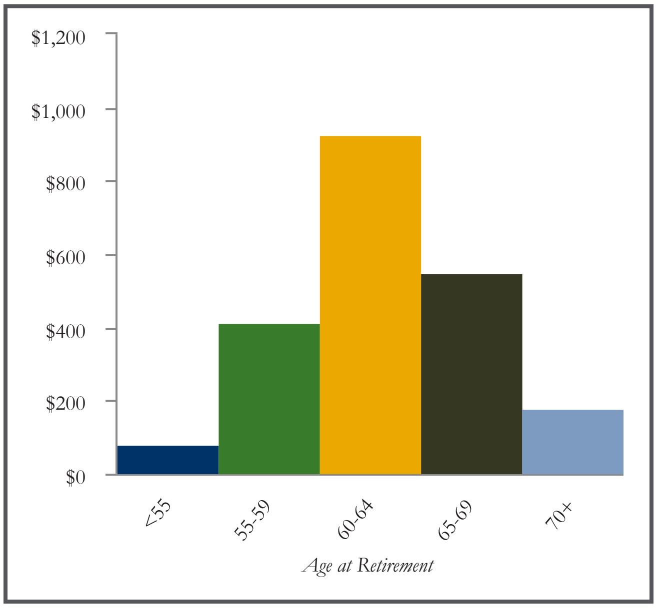
2023 2024 PSRS New Service Retirees by Monthly Final Average Salary



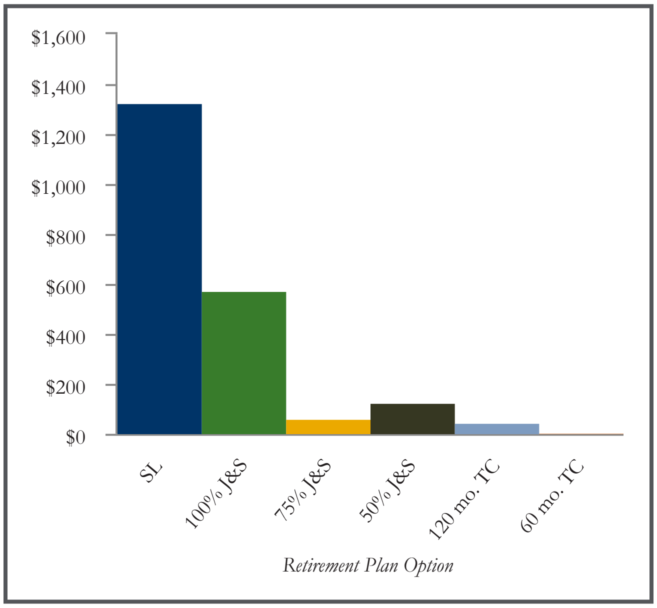
PEERS 2023 2024 New Service Retirees

	Service Retirees	Disability Retirees	Beneficiaries
Retirees July 1, 2023	34,281	767	2,689
Added during the Year	2,158	11	236
Died during the Year	(982)	(40)	(137)
Other	2	(2)	2
Retirees June 30, 2024	35,459	736	2,790

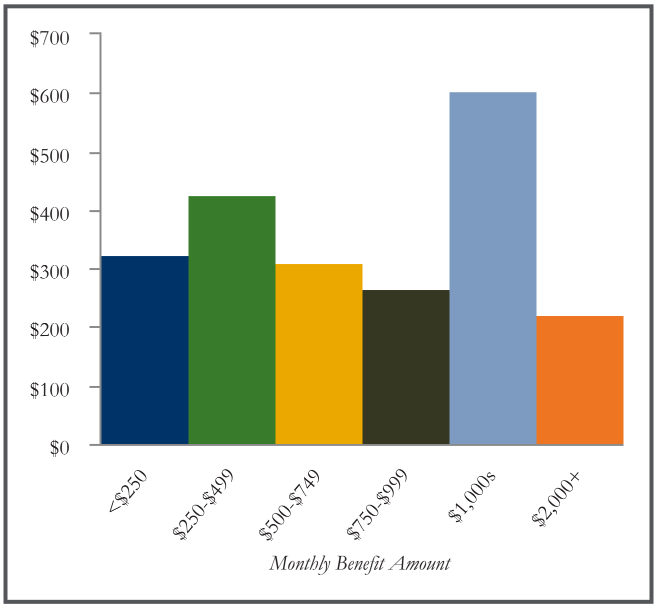
2023 2024 PEERS New Service Retirees by Age at Retirement



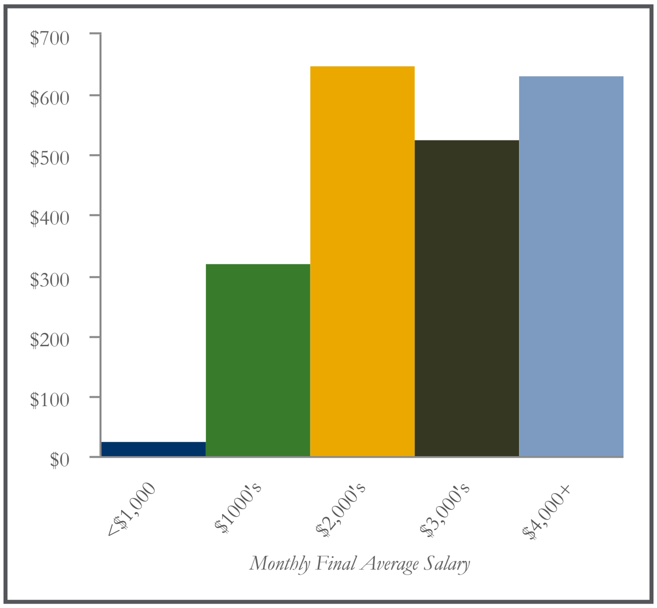
2023 2024 PEERS New Service Retirees by Retirement Plan Option



2023 2024 PEERS New Service Retirees by Single Life Monthly Benefit Amount



2023 2024 PEERS New Service Retirees by Monthly Final Average Salary



PSRS Schedule of Average Benefit Payments to New Service Retirees

	Years of Service							
	5 - 9.9	10 - 14.9	15 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40+
2023-2024								
Average monthly benefit	$ 720	$ 1,445	$ 2,399	$ 3,608	$ 4,827	$ 5,991	$ 7,053	$ 7,218
Average final average salary	$ 4,590	$ 5,091	$ 5,755	$ 6,367	$ 7,205	$ 7,693	$ 7,947	$ 7,691
Number of retirees	303	216	266	488	1,133	388	22	10
2022-2023								
Average monthly benefit	$ 688	$ 1,410	$ 2,285	$ 3,592	$ 4,708	$ 6,115	$ 6,881	$ 7,236
Average final average salary	$ 4,304	$ 4,967	$ 5,536	$ 6,407	$ 7,025	$ 7,835	$ 7,682	$ 7,236
Number of retirees	296	229	269	553	1,169	399	49	13
2021-2022								
Average monthly benefit	$ 713	$ 1,465	$ 2,284	$ 3,506	$ 4,550	$ 5,776	$ 7,037	$ 8,161
Average final average salary	$ 4,523	$ 4,963	$ 5,571	$ 6,251	$ 6,786	$ 7,387	$ 7,915	$ 8,161
Number of retirees	276	236	324	538	914	396	39	8
2020-2021								
Average monthly benefit	$ 684	$ 1,381	$ 2,339	$ 3,423	$ 4,396	$ 5,558	$ 6,093	$ 7,218
Average final average salary	$ 4,380	$ 4,694	$ 5,519	$ 6,096	$ 6,609	$ 7,133	$ 6,791	$ 7,218
Number of retirees	267	239	289	518	825	397	40	12
2019-2020								
Average monthly benefit	$ 651	$ 1,419	$ 2,258	$ 3,412	$ 4,476	$ 5,766	$ 6,717	$ 8,435
Average final average salary	$ 3,940	$ 4,836	$ 5,345	$ 6,098	$ 6,673	$ 7,357	$ 7,428	$ 8,435
Number of retirees	220	235	299	482	785	390	53	8
2018-2019								
Average monthly benefit	$ 657	$ 1,323	$ 2,260	$ 3,273	$ 4,364	$ 5,480	$ 7,506	$ 8,813
Average final average salary	$ 4,117	$ 4,597	$ 5,375	$ 5,848	$ 6,541	$ 7,024	$ 8,156	$ 8,813
Number of retirees	249	267	267	494	766	408	38	13
2017-2018								
Average monthly benefit	$ 708	$ 1,361	$ 2,161	$ 3,124	$ 4,357	$ 5,374	$ 6,871	$ 7,111
Average final average salary	$ 4,394	$ 4,641	$ 5,144	$ 5,632	$ 6,453	$ 6,912	$ 7,410	$ 7,111
Number of retirees	228	263	301	486	712	371	35	10
2016-2017								
Average monthly benefit	$ 639	$ 1,296	$ 2,228	$ 3,213	$ 4,289	$ 5,135	$ 6,427	$ 6,881
Average final average salary	$ 3,806	$ 4,476	$ 5,320	$ 5,737	$ 6,395	$ 6,574	$ 7,056	$ 6,881
Number of retirees	249	243	339	531	756	427	44	12
2015-2016								
Average monthly benefit	$ 671	$ 1,322	$ 2,179	$ 3,127	$ 4,152	$ 4,942	$ 5,627	$ 6,686
Average final average salary	$ 4,141	$ 4,515	$ 5,192	$ 5,628	$ 6,193	$ 6,389	$ 6,195	$ 6,686
Number of retirees	251	265	328	530	745	430	37	17
2014-2015								
Average monthly benefit	$ 729	$ 1,351	$ 2,102	$ 3,083	$ 4,120	$ 5,064	$ 6,130	$ 6,418
Average final average salary	$ 4,342	$ 4,581	$ 5,004	$ 5,562	$ 6,091	$ 6,324	$ 6,521	$ 6,418
Number of retirees	255	308	313	487	677	469	46	15

PEERS Schedule of Average Benefit Payments to New Service Retirees

	Years of Service					
	5 - 9.9	10 - 14.9	15 - 19.9	20 - 24.9	25 - 29.9	30+
2023-2024						
Average monthly benefit	$ 285	$ 608	$ 926	$ 1,394	$ 1,949	$ 2,881
Average final average salary	$ 2,614	$ 3,096	$ 3,374	$ 3,857	$ 4,483	$ 5,360
Number of retirees	619	389	367	409	267	107
2022-2023						
Average monthly benefit	$ 277	$ 559	$ 900	$ 1,295	$ 1,845	$ 2,554
Average final average salary	$ 2,490	$ 2,891	$ 3,284	$ 3,609	$ 4,241	$ 4,660
Number of retirees	657	443	375	508	306	139
2021-2022						
Average monthly benefit	$ 266	$ 562	$ 888	$ 1,338	$ 1,846	$ 2,564
Average final average salary	$ 2,428	$ 2,872	$ 3,237	$ 3,731	$ 4,278	$ 4,783
Number of retirees	709	478	374	497	310	124
2020-2021						
Average monthly benefit	$ 257	$ 557	$ 860	$ 1,195	$ 1,617	$ 2,579
Average final average salary	$ 2,290	$ 2,849	$ 3,137	$ 3,353	$ 3,740	$ 4,755
Number of retirees	636	477	377	467	226	143
2019-2020						
Average monthly benefit	$ 261	$ 519	$ 849	$ 1,224	$ 1,708	$ 2,286
Average final average salary	$ 2,339	$ 2,684	$ 3,098	$ 3,418	$ 3,924	$ 4,228
Number of retirees	555	467	347	407	229	127
2018-2019						
Average monthly benefit	$ 253	$ 521	$ 828	$ 1,206	$ 1,691	$ 2,530
Average final average salary	$ 2,259	$ 2,680	$ 3,021	$ 3,363	$ 3,906	$ 4,629
Number of retirees	544	396	374	424	231	135
2017-2018						
Average monthly benefit	$ 244	$ 510	$ 830	$ 1,171	$ 1,787	$ 2,365
Average final average salary	$ 2,167	$ 2,686	$ 3,009	$ 3,303	$ 4,075	$ 4,367
Number of retirees	557	389	348	410	196	125
2016-2017						
Average monthly benefit	$ 255	$ 483	$ 802	$ 1,157	$ 1,690	$ 2,441
Average final average salary	$ 2,209	$ 2,523	$ 2,919	$ 3,225	$ 3,874	$ 4,505
Number of retirees	558	425	339	363	209	129
2015-2016						
Average monthly benefit	$ 238	$ 493	$ 785	$ 1,160	$ 1,630	$ 2,235
Average final average salary	$ 2,078	$ 2,520	$ 2,807	$ 3,231	$ 3,703	$ 4,128
Number of retirees	520	410	328	289	235	121
2014-2015						
Average monthly benefit	$ 237	$ 490	$ 766	$ 1,162	$ 1,665	$ 2,212
Average final average salary	$ 2,054	$ 2,500	$ 2,802	$ 3,229	$ 3,824	$ 4,073
Number of retirees	529	419	303	309	197	127

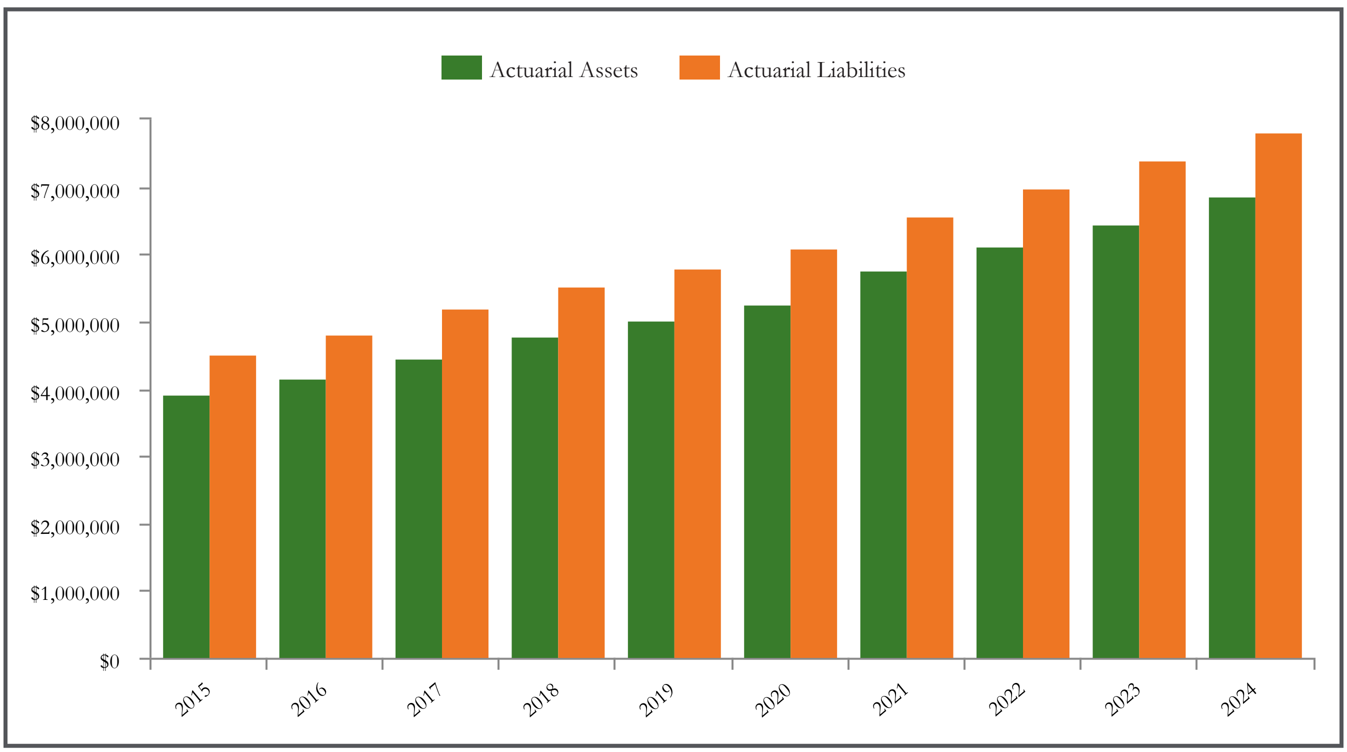
Comparisons of Actuarial Assets and Total Actuarial Liabilities

Public School Retirement System of Missouri

Dollar Amounts in Thousands

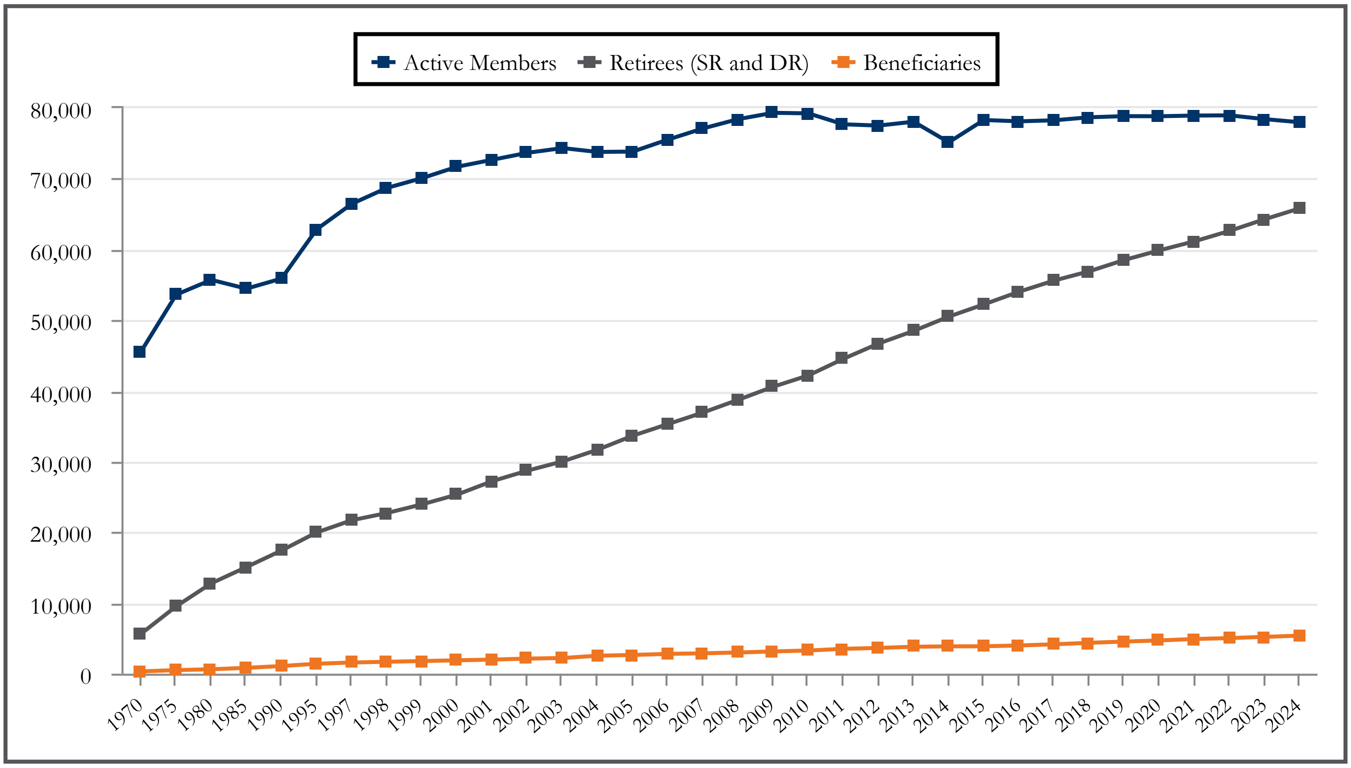
Public Education Employee Retirement System of Missouri

Dollar Amounts in Thousands

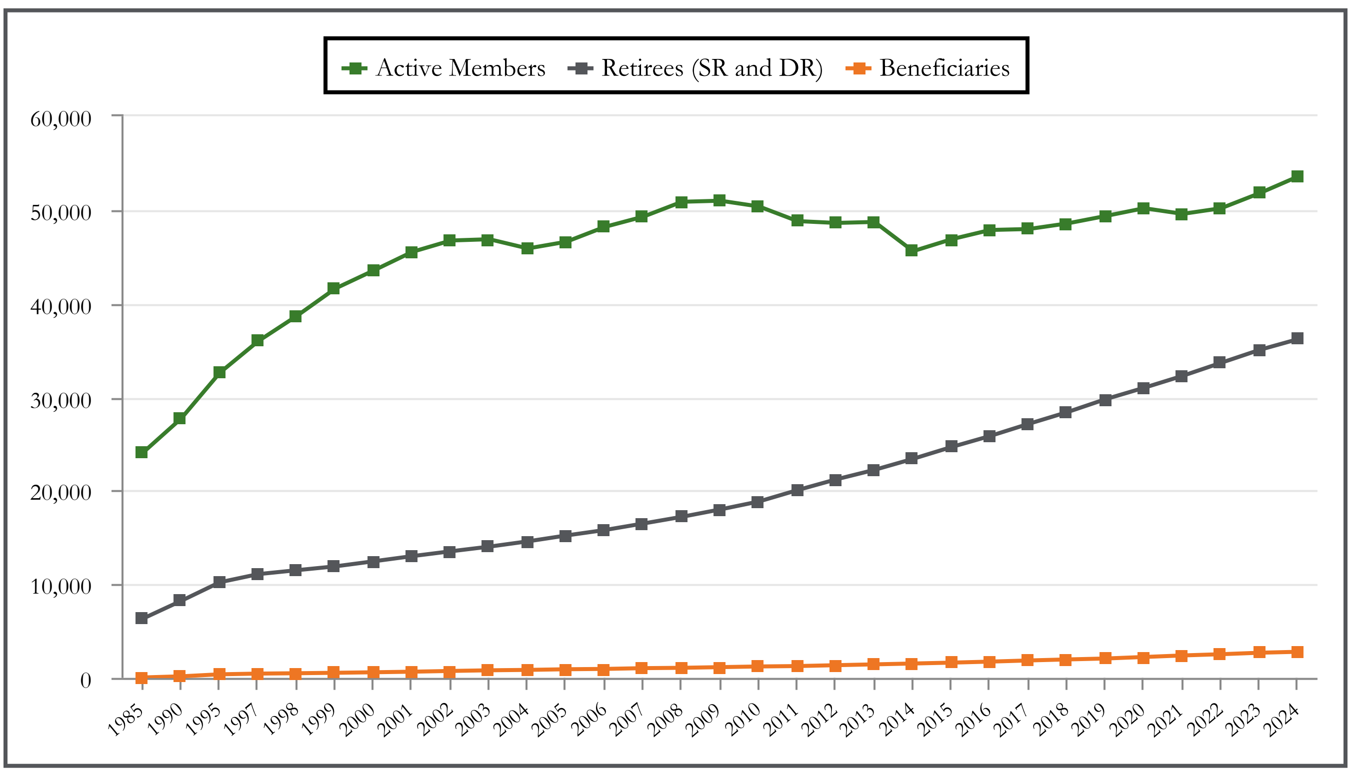


Growth in Membership

Public School Retirement System of Missouri



Public Education Employee Retirement System of Missouri



PSRS Schedule of Covered Employees in the Top 10 Employers

Employer	2024 Covered Employees	2024 Percentage of Total	2023 Covered Employees	2023 Percentage of Total
Special School District - St. Louis	2,709	3%	2,790	3%
Springfield R-XII Schools	2,593	3%	2,597	3%
Rockwood R-VI Schools	1,867	2%	1,884	2%
North Kansas City Schools	1,862	2%	1,845	2%
Columbia Public Schools	1,806	2%	1,801	2%
Ft. Zumwalt R-II Schools	1,684	2%	1,720	2%
Parkway C-2 Schools	1,641	2%	1,647	2%
Wentzville R-IV Schools	1,545	2%	1,548	2%
Lee's Summit R-VII Schools	1,534	2%	1,517	2%
Francis Howell R-III Schools	1,438	2%	1,447	2%
All Others	63,067	78%	63,868	78%
Total - 534 Employers	81,746	100%	82,664	100 %

Employer	2022 Covered Employees	2022 Percentage of Total	2021 Covered Employees	2021 Percentage of Total
Special School District - St. Louis	2,850	3%	2,880	3%
Springfield R-XII Schools	2,585	3%	3,015	4%
Rockwood R-VI Schools	1,887	2%	1,934	2%
North Kansas City Schools	1,848	2%	1,811	2%
Columbia Public Schools	1,838	2%	1,810	2%
Ft. Zumwalt R-II Schools	1,732	2%	1,725	2%
Parkway C-2 Schools	1,679	2%	1,649	2%
Wentzville R-IV Schools	1,534	2%	1,517	2%
Hazelwood R-I Schools	1,526	2%	—	—%
Lee's Summit R-VII Schools	1,502	2%	1,499	2%
Francis Howell R-III Schools	—	—%	1,529	2%
All Others	64,313	78%	63,596	77%
Total - 533 Employers	83,294	100%	82,965	100%

Employer	2020 Covered Employees	2020 Percentage of Total	2019 Covered Employees	2019 Percentage of Total
Special School District - St. Louis	2,873	3%	2,932	4%
Springfield R-XII Schools	2,759	3%	2,302	3%
Rockwood R-VI Schools	1,911	2%	1,915	2%
North Kansas City Schools	1,807	2%	1,797	2%
Columbia Public Schools	1,774	2%	1,745	2%
Ft. Zumwalt R-II Schools	1,727	2%	1,750	2%
Parkway C-2 Schools	1,685	2%	1,728	2%
Francis Howell R-III Schools	1,522	2%	1,523	2%
Lee's Summit R-VII Schools	1,480	2%	1,476	2%
Hazelwood R-I Schools	1,456	2%	1,449	2%
All Others	63,667	78%	63,951	77%
Total - 533 Employers	82,661	100%	82,568	100%

PSRS Schedule of Covered Employees in the Top 10 Employers (continued)

Employer	2018 Covered Employees	2018 Percentage of Total	2017 Covered Employees	2017 Percentage of Total
Special School District - St. Louis	2,922	4%	2,914	4%
Springfield R-XII Schools	2,205	3%	2,208	3%
Rockwood R-VI Schools	1,916	2%	1,926	2%
North Kansas City Schools	1,758	2%	1,735	2%
Columbia Public Schools	1,737	2%	1,726	2%
Ft. Zumwalt R-II Schools	1,736	2%	1,670	2%
Parkway C-2 Schools	1,733	2%	1,703	2%
Francis Howell R-III Schools	1,522	2%	1,510	2%
Lee’s Summit R-VII Schools	1,471	2%	1,459	2%
Hazelwood R-I Schools	1,435	2%	1,488	2%
All Others	64,078	77%	63,886	77%
Total - 533 Employers during 2018 and 534 Employers during 2017	82,513	100%	82,225	100%

Employer	2016 Covered Employees	2016 Percentage of Total	2015 Covered Employees	2015 Percentage of Total
Special School District - St. Louis	2,956	4%	2,995	4%
Springfield R-XII Schools	2,208	3%	2,189	3%
Rockwood R-VI Schools	2,036	2%	2,003	2%
Columbia Public Schools	1,844	2%	1,779	2%
Parkway C-2 Schools	1,804	2%	1,769	2%
North Kansas City Schools	1,723	2%	1,713	2%
Ft. Zumwalt R-II Schools	1,611	2%	1,611	2%
Hazelwood R-I Schools	1,559	2%	1,577	2%
Francis Howell R-III Schools	1,549	2%	1,610	2%
Lee's Summit R-VII Schools	1,443	2%	1,415	2%
All Others	64,842	77%	65,940	77%
Total - 534 Employers during 2016 and 535 Employers during 2015	83,575	100%	84,601	100%

Note: Schedules reflect total members reported at any time during the fiscal year. If an employer was not in the Top Ten for a year their covered employees are included in "All Others".

PEERS Schedule of Covered Employees in the Top 10 Employers

Employer	2024 Covered Employees	2024 Percentage of Total	2023 Covered Employees	2023 Percentage of Total
Special School District - St. Louis	2,919	5 %	2,855	5%
Springfield R-XII Schools	1,818	3 %	1,738	3%
North Kansas City Schools	1,579	3 %	1,583	3%
Lee's Summit R-VII Schools	1,362	2 %	1,369	2%
Ft. Zumwalt R-II Schools	1,398	2 %	1,350	2%
Columbia Public Schools	1,372	2 %	1,266	2%
Rockwood R-VI Schools	1,245	2 %	1,257	2%
Wentzville R-IV Schools	1,165	2 %	1,184	2%
Independence Public Schools	1,114	2 %	1,101	2%
Francis Howell R-III Schools	1,066	2 %	1,098	2%
All Others	46,736	75%	45,575	75%
Total - 531 Employers	61,774	100%	60,376	100%

Employer	2022 Covered Employees	2022 Percentage of Total	2021 Covered Employees	2021 Percentage of Total
Special School District - St. Louis	2,704	5%	2,622	5%
Springfield R-XII Schools	1,609	3%	1,607	3%
North Kansas City Schools	1,526	3%	1,478	3%
Ft. Zumwalt R-II Schools	1,431	2%	1,404	2%
Lee’s Summit R-VII Schools	1,356	2%	1,333	2%
Rockwood R-VI Schools	1,293	2%	1,399	2%
Columbia Public Schools	1,257	2%	1,187	2%
Wentzville R-IV Schools	1,200	2%	1,181	2%
Francis Howell R-III Schools	1,104	2%	1,118	2%
Independence Public Schools	1,078	2%	1,033	2%
All Others	44,160	75%	42,208	75%
Total - 530 Employers	58,718	100%	56,570	100%

Employer	2020 Covered Employees	2020 Percentage of Total	2019 Covered Employees	2019 Percentage of Total
Special School District - St. Louis	2,616	5%	2,573	5%
Springfield R-XII Schools	1,588	3%	1,505	3%
Rockwood R-VI Schools	1,480	3%	1,515	3%
North Kansas City Schools	1,463	3%	1,479	3%
Ft. Zumwalt R-II Schools	1,431	3%	1,388	2%
Lee’s Summit R-VII Schools	1,330	2%	1,355	2%
Columbia Public Schools	1,186	2%	1,182	2%
Wentzville R-IV Schools	1,141	2%	1,107	2%
Francis Howell R-III Schools	1,137	2%	—	—%
Independence Public Schools	1,100	2%	1,094	2%
Parkway C-2 Schools	—	—%	1,038	2%
All Others	42,097	73%	41,776	74%
Total - 530 Employers	56,569	100%	56,012	100%

PEERS Schedule of Covered Employees in the Top 10 Employers (continued)

	2018		2017	
Employer	Covered Employees	Percentage of Total	Covered Employees	Percentage of Total
Special School District - St. Louis	2,500	5%	2,504	5%
Rockwood R-VI Schools	1,523	3%	1,499	3%
Springfield R-XII Schools	1,510	3%	1,503	3%
North Kansas City Schools	1,406	3%	1,406	3%
Ft. Zumwalt R-II Schools	1,352	2%	1,291	2%
Lee's Summit R-VII Schools	1,340	2%	1,278	2%
Columbia Public Schools	1,183	2%	1,160	2%
Independence Public Schools	1,083	2%	1,083	2%
Parkway C-2 Schools	1,034	2%	1,054	2%
Wentzville	1,099	2%	—	—%
Hazelwood R-I Schools	—	—%	959	2%
All Others	41,029	74%	40,305	74%
Total - 530 Employers	55,059	100%	54,042	100%

	2016		2015	
Employer	Covered Employees	Percentage of Total	Covered Employees	Percentage of Total
Special School District - St. Louis	2,501	5%	2,496	5%
Springfield R-XII Schools	1,540	3%	1,540	3%
North Kansas City Schools	1,397	3%	1,369	3%
Rockwood R-VI Schools	1,319	2%	1,230	2%
Lee's Summit R-VII Schools	1,294	2%	1,283	2%
Ft. Zumwalt R-II Schools	1,228	2%	1,232	2%
Columbia Public Schools	1,126	2%	1,081	2%
Independence Public Schools	1,111	2%	1,135	2%
Parkway C-2 Schools	1,060	2%	1,054	2%
Hazelwood R-I Schools	964	2%	1,004	2%
All Others	40,351	75%	40,627	75%
Total - 530 Employers in 2016, 532 Employers in 2015	53,891	100%	54,051	100%

Note: Schedules reflect total members reported at any time during the fiscal year. If an employer was not in the Top Ten for a year their covered employees are included in "All Others".

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PSRS/PEERS

PUBLIC SCHOOL & EDUCATION EMPLOYEE
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